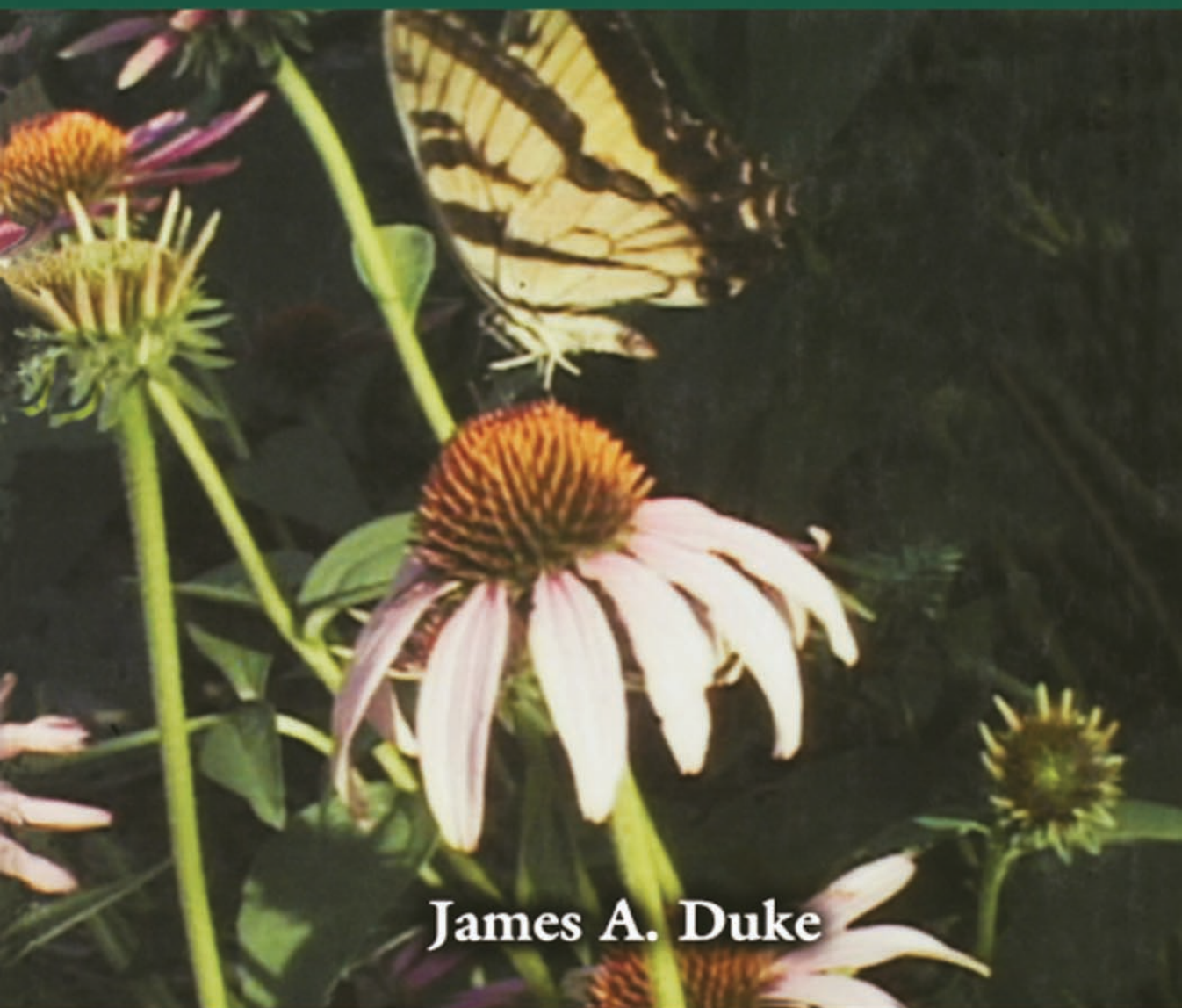


Handbook of
**Phytochemical
Constituents of
GRAS Herbs and
Other Economic Plants**



James A. Duke

Herbal Reference Library

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Dr. Duke spends time exploring the ecology and culture of the Amazonian Rain Forest and sits on the board of directors and advisory councils of numerous organizations involved in plant medicine and the rainforest. He is updating several of his published books and refining his on-line database, <http://www.ars-grin.gov/duke/>, still maintained at the USDA. He is also expanding his private educational Green Farmacy Garden at his residence in Fulton, Maryland.



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Introduction

Some jobs never come to an end. That's the way CRC's Harvey Kane and I feel about this one. But when I showed him how useful this compilation could be, used either as hard copy or database, he thought it was time CRC published the first installment, before it became too unwieldy. This compilation contains most, if not all of the generally recognized as safe (GRAS) herbs, and many medicinally important foods (GRAF or generally recognized as food). The compilation also contains and about 500 strictly medicinal plants (GRAP or generally recognized as poisonous or medicinal species) for which I found interesting data. All told, about 1,000 plants are covered in the *Handbook or Database of Phytochemical Constituents of GRAS Herbs and Other Economic Plants* and about 3,000 compounds are treated in the *Handbook or Database of Biologically Active Phytochemicals and Their Activities*. In collaboration with Drs. C. Rose Broome and James L. Reveal of the University of Maryland, I used their computer facility and a remote terminal at home to compile data on phytochemicals reported for various plants, concentrating on these GRAS and GRAF herbs. I termed these databases Father Nature's Farmacy, and under this copyrighted name, early entries were published in *HerbalGram*, the Education Publication of the American Botanical Council and the Herb Research Foundation.

I consulted five major sources when trying to determine if a plant is generally recognized as food.

1. Facciola, S., *Cornucopia: A Source Book of Edible Plants*, Kampong Publications, Vista, CA, 1990.
2. Hedrick, U. P., Ed., *Sturtevant's Edible Plants of the World*, Dover Publications Reprint (1972), New York, 1919.
3. Kunkel, G., *Plants for Human Consumption*, Koeltz Science Publishers, Koenigstein, Germany, 1984.
4. Tanaka, T., *Tanaka's Cyclopedia of Edible Plants of the World*, Keigaku Publishing Co., Tokyo, 1976.
5. Yanovsky, E., *Food Plants of the North American Indians*, USDA Misc. Publ. No. 237, U.S. Government Printing Office, Washington, DC, 1936.

Unfortunately, some plants like the opium poppy, *Papaver somniferum*, fall into all three categories of this newly recognized triad of acronyms, GRAF, GRAP, and GRAS. Poppy seeds are clearly GRAF (generally recognized as food), and are widely eaten in pastries, for example. From the GRAP (generally recognized as poisonous or medicinal) point of view, dried latex of the poppy (opium) and its derivative alkaloids, e.g., codeine and morphine, are poisonous

yet very important medicinally. I really think GRAM (generally recognized as medicinal) would have made a better acronym, but all medicines are poisonous; it's just a matter of dosage. Poppy seeds are (or at least once were) a GRAS (generally recognized as safe) spice or culinary additive to foods. The Herb Research Foundation (Rob McCaleb, President, Suite 200F, 1007 Pearl Street, Boulder, Colorado 80302) has a computerized list of GRAS herbs as things were interpreted in the 1980s. Recently, however, one cannot get a definitive opinion on whether an herb is GRAS or not. Such classification is always open to review, according to my interpretation of the latest FDA edicts. If you can get a copy of an intelligible GRAS list from the FDA, I'll gladly exchange a revised computerized Database of Biologically Active Phytochemicals for a copy. In spite of several letters, I have been unable to procure from FDA an FDA-revised GRAS list, so accurately classifying an herb as GRAS can be like trying to hit a moving target. And the latest list I have is from the Herb Research Foundation, not the FDA.

Apples are GRAF and apple extracts are GRAS, but the cyanide in the seeds is GRAP. A lot of people eat shoots of pokeweed (*Phytolacca americana*) in spring (even though poisonings sometimes ensue). Hence, parboiled pokeweed shoots are GRAF. Pokeweed antiviral proteins or mitogens are GRAP but have important medicinal potential. There are probably carcinogens, mutagens, and poisons, as well as anticarcinogens, antimutagens, and antidotes in all GRAF, GRAP, and GRAS species. Thus assigning the species treated herein, or plant parts thereof, to one or the other category could be more controversial than constructive or instructive. In these litigious times, the reader is reminded that every species treated herein contains poisonous compounds and that all the biologically active phytochemicals can be considered poisonous; again, it's a matter of dosage.

Early in the project, I systematically scanned some major references (AYL, BML, CCO, CRC, GEO, HHB, JAD, JEL, JFM, MPI, USA, WBB and WOI, see list of abbreviations below), not always citing these prime sources. Many of the essential oil data were gathered with all the books propped open and within reach, but the majority of essential oil data came from BML, GEO, and HHB, often uncited as they are in this volume. Maturing, I realized I frequently have to check back on some of my sources. As the database grew, I became more careful about sourcing my data, still keeping my citations as terse as possible.

In initiating the project, I entered any compound or element, whether accompanied by quantitative data or not. Finally I realized the futility of merely listing a universal element like *zinc*. Since all plants contain zinc, it is a useless listing, unless accompanied by quantitative data. Now as I write the introduction, 5 years after I started the unending compilation, I will no longer enter a ubiquitous element like zinc or a compound like sitosterol unless there is quantitative data to accompany it.

For quantitative data, I have resorted to the parts per million (ppm) unit as the default entry. Any time a number follows the name of a compound or

element, it is in ppm unless otherwise stated. Sometimes I use parts per billion (ppb), but that will be indicated.

The numbers are strictly ballpark numbers, but are certainly better than no numbers at all. This is how I arrived at some of them. With many of the GRAS herbs, the active ingredients are in the essential oils which I have consistently abbreviated as EO (see the two-letter abbreviations for plant parts following these introductory comments). One source may tell you that, for example, the essential oil consists of 15 to 25% pinene. Until you know how much essential oil there is in the plant, that's almost useless information too. But once you learn from another source that the plant contains 1 to 2% EO on a fresh-weight basis, you then know that the plants contain 10,000 to 20,000 ppm EO. If 15% of that oil is pinene, the plant contains no less than 1,500 ppm pinene if it contains 10,000 ppm essential oil. If 25% of that oil is pinene, the plant could then possibly contain as much as 5,000 ppm pinene, if the plant contains the maximum or 20,000 ppm EO on a fresh-weight basis. Your data is further complicated by the classification as fresh-weight basis or as-purchased basis (APB). In another example, if your mint contained 90% water, as do many leaves on an as-purchased basis, you would multiply the high figure by ten to get the zero-moisture basis (ZMB), a theoretically possible maximum of 50,000 ppm pinene. That's why it is important to know the percentage of water.

Similarly, if one book said the plant contained 10% alkaloids, and another source said 5% of the alkaloids were berberine, I scored it as $.05 \times 100,000 \text{ ppm} = 5,000 \text{ ppm}$ berberine, rarely entering the ppm, since that is the default unit. With much of the USGS data, a plant's ash was estimated at 10% or 100,000 ppm, and if the ash was 1.3% aluminum, I multiplied the 100,000 by 0.013 to get 1,300 ppm aluminum. If one species in a genus had 10% ash or 1% essential oil, and I had data for another species in the genus, I often assumed that 10% ash or 1% essential oil, to estimate quantitative data. That's why the numbers in here are best considered a first approximation, gradually working closer to the truth, and better documented as I continue compiling.

Some sources, such as the USDA's *Agricultural Handbook No. 8* and its sequels, always present data on the fresh-weight or APB basis, rightly recognizing that as the most commonly edible form. Other sources consistently present their data on a zero-moisture basis (ZMB). Still other sources don't let you know. The okra entry (alphabetically our first entry) shows some of the liberties I have taken with USDA data. With okra, it is the fruit (FR) that we normally ingest, and that's the part to which the USDA data pertain. In *Agricultural Handbook No. 8-11*, the handbook for vegetables, okra is said to contain 89.58% water (89.58 g/100 g) which is equivalent to 895,800 ppm water. Like most fruits and vegetables, okra is approximately 90% (900,000 ppm) water. Unlike some fruits, such as apples, grapes, and plums, we rarely dry okra. But as energy becomes more and more expensive, solar-dried fruits and vegetables may become economically and energetically, if not culinarily, more attractive and competitive than canned, frozen, or processed fruits and vegetables. Fresh okra is also reported to contain 2 g protein per 100 g, which

is 2% or 20,000 ppm. If we somehow drove off all the water, the dried okra would then contain 20% or 200,000 ppm protein. For any plant material that contains 90% water, multiply a nutrient by 10 to calculate the nutrient content on a zero-moisture basis. If it's 95% moisture, multiply by 20; 90%, by 10; 80%, by 5; 75%, by 4; 66.7%, by 3; 50%, by 2, to get the ZMB equivalent. Where I have moisture percentages, I have already converted for you, such that you have the minimum value for fresh weight and the theoretical maximum value for dry weight. I have even incorporated the standard error for the USDA data. For magnesium, the USDA average of 57 mg per 100 g (570 ppm) may be high or low by 2.5 mg. That converts to 545 to 595 ppm for the fresh okra and 5,450 to 5,950 for the zero moisture okra, rounded up to 6,000. More extreme data from *The Wealth of India* (WOI) extend the lower end of the range down to 380 ppm fresh weight. Nutritionists may think me balmy to talk about dried okra. Remember that dried grapes and plums are promoted as being rich in iron, fiber, etc., when in fact, they are as soon termed poorer in water as richer in nutrients. Dry anything and it becomes increasingly richer in nutrient, poorer in water. WOI also gives data for okra seed. It contains 2,100 ppm calcium, but here no range is given. If new data become available, they will be added. But as of this printing, I have only the one bit of data.

The important biologically active compound gossypol, used as a male contraceptive in China, occurs in the seed of many Malvaceae, okra included. Note the gossypol entry. The 70 is ppm, the SD stands for seed, and JAF38:506 is the journal reference I used for recent new data, standing for *Journal of Agriculture and Food Chemistry*, Vol. 38, page 506. I assumed this data was on a dry-weight basis; hence, I did not convert to a zero-moisture basis. With seeds containing relatively little water, such conversions result in small incremental changes, not multiples such as we have with wet tissues like fruits and leaves. The journal abbreviations are explained below.

CODES USED IN THE DATABASES

In the *Database of Phytochemical Constituents of GRAS Herbs and Other Economic Plants*, the species names are followed by an alphabetical listing of reported constituents. Where available, quantitative data follow the names of the elements or compounds. Such numbers are in ppm. Zero-moisture-basis (ZMB) values were calculated by multiplying high as-purchased-basis (APB) by 100, divided by 100 minus X, where X = fresh moisture percentage. Following the name of a compound, ND = not detected, and TR = trace.

Following the quantitative data, if any, are two-letter abbreviations, standing for plant parts:

AN = Anther
AR = Aril
AS = Ash
BD = Bud

EX = Exocarp
FL = Flower
FR = Fruit
GU = Gum

PO = Pollen or Spore
RE = Resin/Exudate/Sap
RH = Rhizome
RT = Root

BK = Bark	HA = Hay	SH = Shoot
BR = Branches	HU = Hull/Husk	SI = Silk/Stigma/Style
BU = Bulb	IN = Inflorescence	SP = Sprout/Seedling
CB = Cob	JU = Juice	ST = Stem
CP = Caryopsis	LF = Leaf	TC = Tissue Culture
CX = Calyx	LX = Latex/Exudate	TE = Testa
CY = Cotyledon	MC = Mesocarp	TU = Tuber
EC = Endocarp	OL = Oil	TW = Twig
EM = Embryo	PC = Pericarp	WD = Wood
EN = Endosperm	PE = Petiole	WX = Wax
EO = Essential Oil	PI = Pith	
EP = Epidermis	PL = Plant	

Then, there may be a three-letter abbreviation indicating a primary source, or an alphanumeric abbreviation indicating journal sources. I have indicated one volume with a year so readers can gauge how recent a reference is, but I may have cited many volumes of that journal over several years.

AAA = *Agents and Actions* (Vol. 31 = 1990)

AAS = *Acta Agriculturae Scandinavica*, Suppl.22:89–113, 1980.

ABC = *Agricultural Biological Chemistry* (Vol. 55 = 1991)

ABO = *Acta Botanica Sinica*

ABS = Abstract filed under the genus with Economic Botany Files at USDA. Often footnoted in the databases.

ACM = *Advance in Chinese Medicinal Materials Research*. Chang, H. M., Yeung, H. W., Tso, W. -W., and Koo, A., Eds., World Scientific Publishing Co., Philadelphia, 1985, 742 pp.

ALK = Alkaloid Books (2)

1. Willaman, J. J. and Li, H. L., Alkaloid-Bearing Plants and Their Contained Alkaloids, *J. Nat. Prod. (Lloydia)*, 33: Suppl. No. 3A; 286 pp.
2. Willaman, J. J. and Schubert, B.G., USDA Tech. Bull. 1234, Washington, DC, 1961, 287 pp.

APP = *Acta Physiol. Pharmacol. Bulg.* (Vol. 16 = 1990)

AVR = *Antiviral Research* (in many cases I consulted the abstract only) (Vol. 1 = 1981)

AYL = Leung, A. Y., *Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics*, John Wiley & Sons, New York, 1980, 409 pp.

B&H = Bradbury, J. H., and Holloway, W. D., *Chemistry of Tropical Root Crops*, Australian Centre for International Research, Canaberra, 1988, 201 pp.

BML = Lawrence, B. M., Three annual compilations on essential oils

1. Lawrence, B. M., *Essential Oils 1976–1977*, Allured Publishing Corp., Wheaton, IL, 1978, 175 pp.
2. Lawrence, B. M., *Essential Oils 1978*, Allured Publishing Corp., Wheaton, IL, 1979, 192 pp.

3. Lawrence, B. M., *Essential Oils 1979–1980*, Allured Publishing Corp., Wheaton, IL, 1981, 292 pp.

BOB = *Betting on Boron*, Unpublished draft by J. A. Duke on file at USDA, draft and papers relating to boron percentages. Includes *Internat. Z. Vit. Ern. Forschung* 43:1973 (boron)

BP = *Biochemical Pharmacology* (Vol. 1 = 1958)

BPCC = *Biosynthetic Products for Cancer Chemotherapy* (Petit and associates)

1. Petit, G. R., *Biosynthetic Products for Cancer Chemotherapy*, Vol. 1, Plenum Press, New York, 1977, 215 pp.
2. Petit, G. R. and Cragg, G. M., *Biosynthetic Products for Cancer Chemotherapy*, Vol. 2, Plenum Press, New York, 1977, 150 pp.

CAL = Chen, H. C. and Lin, S. M., Determination of Mineral Elements in Certain Crude Drugs (Part 1), *Kaohsiung J. Med. Sci.*, 4:259-272, 1988.

CCG = Miller, D. F., *Composition of Cereal Grains and Forages*, Publ. 585, National Academy of Sciences–National Research Council, Washington, DC, 1958, 663 pp.

CCO = (Chemical Constituents of Oriental Plants) Three books edited by H. Hsu, Oriental Healing Arts Institutes.

1. Hsu, H. Y., Chen, Y. P., and Hong, M., *The Chemical Constituents of Oriental Herbs*, Vol. 1, Oriental Healing Arts Institute, Los Angeles, 1982, 1546 pp.
2. Hsu, H. Y., Chen, Y. P., and Hong, M., *The Chemical Constituents of Oriental Herbs*, Vol. 2, Oriental Healing Arts Institute, Long Beach, CA, 1985, 829 pp.
3. Hsu, H. Y., Chen, Y. P., Shen, S. J., Hsu, C. S., Chen, C. C., and Chang, H. C., *Oriental Materia Medica: A Concise Guide*, Oriental Healing Arts Institute, Long Beach, CA, 1986, 932 pp.

CJB = *Canadian Journal of Botany* (Vol. 69 = 1991)

CJT = *Chin. J. Tuber. Respir. Dis.*

CLE = *Cancer Letters* (Vol. 56 = 1991)

CMR = *Chemical Marketing Reporter*; a weekly tabloid

CPA = *Can. Pharm. Assoc. Medication*. 1988

CPB = *Chemical and Pharmaceutical Bulletin* (Vol. 1 = 1953)

CR = *Cancer Research* (Vol. 1 = 1941)

CRC = CRC Press Inc., Boca Raton, FL (2 books)

1. Duke, J. A., *Handbook of Medicinal Herbs*, CRC Press, Boca Raton, FL, 1985, 667 pp.
2. Duke, J. A. and Atchley, A. A., *Handbook of Proximate Analysis Tables of Higher Plants*, CRC Press, Boca Raton, FL, 1986, 389 pp.

DAA = Duke, J. A. and Ayensu, E. E., *Medicinal Plants of China*, 2 vols., Reference Publications, Algonac, MI, 1985, 705 pp.

DAS = Davies, S. and Stewart, A., *Nutritional Medicine*, Avon Books, New York, 1990, 509 pp.

DMD = *Drug Metabolism and Disposition* (Vol. 1 = 1973)

EB = *Economic Botany* (Vol. 45 = 1991)

EEB = *Envir. Exp. Bot.* (Vol. 31 = 1991)

EFN = *Ecology of Food and Nutrition* (Vol. 26 = 1991)

EJP = *European Journal of Pharmacology*

EMM = *Environ. Mol. Mutagen.* (Vol. 18 = 1991)

EMP = *Economic & Medicinal Plant Research*

FFJ = *Flavour & Fragrance Journal* (Vol. 6 = 1991)

FNF = Father Nature's Farmacy: The aggregate of all these three-letter citations. Early entries did not include citation for each element.

FUR = Furr, A. K., MacDaniels, L. H., St. John, L. E., Jr., Gutenmann, W. H., Pakkala, I. S., and Lisk, D. J., Elemental Composition of Tree Nuts, *Bull. Environ. Contam. Toxicol.*, 21:392, 1979.

FT = *Fitoterapia* (Since there is no volume number, I cite a little differently, e.g., FT5:1990 with no page.

GBM = Graedon, J. and Graedon, T., *Graedon's Best Medicine: From Herbal Remedies to High-Tech Rx Breakthroughs*, Bantam Books, New York, 1991, 444 pp.

GEO = Guenther, E., *The Essential Oils*, 6 volumes, D. van Nostrand, New York, 1948–1952.

HAM = *Hamdard Medicus*. A quarterly *Journal of Science and Medicine*.

HEG = *Hegnauer's Chemotaxonomie der Pflanzen*, 8 vols., Volume 8 (Band 8), Birkhauser Verlag, Berlin, 1989, 718 pp.

HG = *HerbalGram* (followed by number without space, e.g., HG17 = *HerbalGram* No. 17, c/o American Botanical Council, P. O. Box 20160, Austin, TX 79720. (No. 19/19 = Fall 1988/Winter 1989)

HH = *Herbal Healthline*, (newsletter compiled by Michael Weiner) P. O. Box 2056, San Rafael, CA 94912 (Vol. 2 = 1991)

HHB = List, P. H. and Horhammer, L., *Hager's Handbuch der Pharmazeutischen Praxis*, Vols. 2–6, Springer-Verlag, Berlin, 1969–1979.

HSC = *HortScience* (Vol. 27 = 1992)

HUL = Hulme, A. C., Ed., *The Biochemistry of Fruits and Their Products*, 2 vols., Academic Press, New York, 1970.

IB = *Indian Biology* (Vol. 23 = 1991)

ID = *Indian Drugs* (Vol. 25 = 1988)

IJE = *Indian Journal of Experimental Biology* (Vol. 29 = 1991)

IJI = *International Journal of Immunopharmacology* (Vol. 10 = 1988)

IJO = *International Journal of Oriental Medicine* (formerly OHAI, Oriental Healing Arts Institute) (Vol. 15 = 1990)

IJP = *Indian Journal of Pharmaceutical Sciences* (Vol. 52 = 1990)

JAD = Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.

JAF = *J. Agri. Food Chemistry* (Vol. 40 = 1992)

JCE = *Journal of Chemical Ecology*

JE = *Journal of Ethnopharmacology* (Vol 29 = 1990)

JEL = Laferriere, J. E., 1988, Nutricomp Program, Nutricomp Database;

reviewed in *J. Ethnobiology* 9(1):27–29; see journal for ordering information.

JEO = *Journal of Essential Oil Research*

JETB = *Journal of Economic and Taxonomic Botany*

JFM = 1. Morton, J. F., *Major Medicinal Plants*, C.C. Thomas, Springfield, IL, 1977, 431 pp.

2. Morton, J. F., *Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan*, C.C. Thomas, Springfield, IL, 1981, 1420 pp.

JFS = *Journal of Food Science* (Vol. 26 = 1961)

JLS = *Journal of the Linnaean Society*

JMC = *Journal Medicinal Chemistry*

JNP = *J. Nat. Prod.* (Vol. 53 = 1990) (formerly *Lloydia*)

JPN = *Journal of Plant Nutrition* (Vol. 14 = 1991)

JPP = *Journal of Pharmacy and Pharmacology* (Vol. 41 = 1990)

JPS = *Journal of Pharmaceutical Sciences* (Vol. 50 = 1961)

JRM = *Journal of Reproductive Medicine* (Vol. 26 = 1981)

JSF = *J. Sci. Food Agric.*

JSG = Glasby, J. H., *Dictionary of Plants Containing Secondary Metabolites*, Taylor & Francis, New York, 1991, 488 pp.

KAD = Felter, H. W. and Lloyd, J. U., *King's American Dispensatory*, 18th ed., 3rd revision, reprinted 1983, Eclectic Medical Publications, Portland, OR, 1898, 2 vols.

LEL = Lewis, W. H. and Elvin-Lewis, M. P. F., *Medical Botany*, John Wiley & Sons, New York, 1977, 515 pp.

LL = *Let's Live*

LWT = *Lebensmittel Wissenschaft & Technologie* (Vol. 24 = 1991)

MPI = *Medicinal Plants of India* (2 volumes so far)

1. ICMR, (Indian Council of Medical Research), *Medicinal Plants of India*, Vol. 1, Satyavati, G. V., Raina, M. K., and Sharma, M., Eds., ICMR, New Delhi, 1976, 48 pp.
2. ICMR, (Indian Council of Medical Research), *Medicinal Plants of India*, Vol. 2, Satyavati, G. V., Gupta, A. K., and Tandon, S. N., Eds., ICMR, New Delhi, 1987, 600 pp.

MUO (MOB) = *Material und Organismen* (Vol. 24 = 1989)

M7 = *Merck* 7th edition, 1960. See below.

M10 = *Merck* 10th edition, 1983. See below.

M11 = *The Merck Index. An Encyclopedia of Chemicals, Drugs, and Biologicals*, 11th ed., Merck & Co., Inc., Rahway, NJ, 1989.

MAR (M28) = Martindale's 28th. *Martindale, The Extra Pharmacopoeia*. See below for publisher information.

M29 = Martindale's 29th. Reynolds, J. E. F., Ed., *Martindale, The Extra Pharmacopoeia*, 29th ed., The Pharmaceutical Press, London, 1989, 1896 pp.

NAH = *Nutrition Action Healthletter* (Vol. 18 = 1991)

NAP = NAPRALERT Database (National Product Alert). With permission

of Norman Farnsworth, College of Pharmacy, University of Illinois at Chicago, P. O. Box 6998, Chicago, IL 60680.

NUT = Duke, J. A., *Handbook of Nuts*, CRC Press, Boca Raton, FL, 1989, 343 pp.

NYT = *The New York Times*, followed by month, date, year

OMM = Oriental Materia Medica. Hsu, H. Y., Chen, Y. P., Shen, S. J., Hsu, C. S., Chen C. C. , and Chang, H. C., *Oriental Materia Medica: A Concise Guide*, Oriental Healing Arts Institute, Long Beach, CA, 1986, 932 pp.

PAACR= *Proceedings of the American Association for Cancer Research*

PAM = Pizzorno, J. E. and Murray, M. T., *A Textbook of Natural Medicine*, John Bastyr College Publications, Seattle, WA, 1985, (looseleaf)

PAN = *El Pan de America* (E. Estrella, 1990)

PAS = Stitt, P. A., *Why George Should Eat Broccoli*, Dougherty Co., Milwaukee, WI, 1990, 399 pp.

PC = *Phytochemistry* (Vol. 29 = 1990)

PDR = *Physicians' Desk Reference* (Vol. 45 = 1991)

PED = Pedersen, M., *Nutritional Herbology*. Pederson Publishing, Bountiful, UT, 1987, 377 pp. (some quantitative data, e.g., selenium, seems inaccurate)

PEP = Ur-Rahman, A., Said, H. M., and Ahmad, V. U., *Pakistan Encyclopaedia Planta Medica*, Vol. 1, Hamdard Foundation Press, Karachi, Pakistan, 1986, 373 pp.

PM = *Planta Medica* (Vol. 56 = 1990)

PMP = *Plantae Medicinales et Phytotherapie*

PMPP= *Physiological and Molecular Plant Pathology* (Vol. 37 = 1990) (abstracts only)

PR = *Phytotherapy Research* (Vol. 4 = 1990)

PS = *Plant Science (Ireland)* (Vol. 75 = 1991)

PTD = Potential Toxic Dose (after Wm. Barnhil, 1991, *AARP Bulletin* 32{11}:3)

QJC = recently became *Int. J. Crude Drug Res.* (Vol. 4 = 1990)

RAA = Rizk, A. F. M. and Al-Nowaihi, A. S., *The Phytochemistry of the Horticultural Plants of Qatar*, Scientific and Applied Research Centre, University of Qatar, Alden Press Ltd, Oxford, 1989, 285 pp.

RDA = Recommended Dietary Allowances, Rev. 1989. NAS. Lowest (usually for infants) to highest (often for lactating females) from National Research Council RDA 10th ed., 1989

RIZ = Rizk, A. F. M., *The Phytochemistry of the Flora of Qatar*, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986, 582 pp.

RR = *Rastitel' nye Resursy* (abstract only) (Vol. 5 = 1969)

SHA = *Scientia Horticulturae (Amsterdam)* (Vol. 47 = 1991)

SMO = Suzuki, A., Morimoto, I., and Okitsu, T., *Elution of Metals from Crude Drugs*, Shoykugaku Zasshi 36(3):190–195, 1982.

SN = *Science News*

STE = *Stermitz Codex Vegetabilis* (ca. 1957). No date, no pagination.

TET = *Tetrahedron* (Vol. 47 = 1991)

TL = *Tetrahedron Letters* (Vol. 32 = 1991)

TOT = Duke, J. A., *Touting Tocopherol* (unpublished draft of miscellaneous tocopherol data, on file at USDA)

UNE = UNESCO, *Medicinal Plants of the Arid Zones*, Chopra, I. C., Abrol, B. K., and Hands, K. L., Eds., (botany); Paris, R. and Dillemann, G., Eds., (pharmacology), UNESCO, Paris, 1960, 96 pp.

USA(USD) = USDA *Agricultural Handbook No. 8* and sequels; strictly nutritional data (always with fresh and converted dry weights)

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1. Boergen, J. G. and Shacklette, H. T., U. S. Geological Survey Open File Report 80-84.
2. Conner, J. J., Shacklette, H. T., et al., U. S. Geological Survey Professional Paper 574-F, 1975, 168 pp.

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VET = Tyler, V. E., *The Honest Herbal*, George F. Stickley Co., Philadelphia, 1982, 263 pp.

W&W = Wagner, H. and Wolff, P., Eds., *New Natural Products and Plant Drugs with Pharmacological, Biological or Therapeutic Activity*, Springer-Verlag, New York, 1977.

WBB = Watt, J. M. and Breyer-Brandwijk, M. G., *The Medicinal and Poisonous Plants of Southern and Eastern Africa*, 2nd ed., E. & S. Livingstone, Ltd., Edinburgh, 1962, 1457 pp.

WIC = Wichtl, M., *Teedrogen. Ein Handbuck fur Apotheker und Arzte*, Wissenschaftliche Verlagsgesellschaft, mbH Stuttgart, 1984, 393 pp.

WOI = *The Wealth of India*, Council of Scientific and Industrial Research, New Delhi, 1948–1976, 11 vols.

YAK = *Yakugaku Zasshi* (Vol. 111 = 1991)

25th = 25th Dispensatory. Osol, A., Farrar, G. E., Jr., et al., *The Dispensatory of the United States of America*, 25th ed., J. B. Lippincott, Philadelphia, 1955, 2139 pp.

The *Database of Biologically Active Phytochemicals and Their Activities* is an alphabetical listing of biologically active phytochemicals. After each phytochemical is an alphabetical listing of the reported activities. Where available, effective or inhibitory concentrations or doses are reported as well. In more recent entries, each biological activity entry will be followed by a reference similar to those used in the *Database of Phytochemical Constituents of GRAS Herbs and Other Economic Plants*. The following abbreviations are unique to the *Database of Biologically Active Phytochemicals and Their Activities*:

ED50 = effective dose at which 50% of subjects are “cured”, “effected”, “affected” or “altered”

IC = inhibitory concentration

Some activity abbreviations occur in admixtures like ASTH-genic or DME-inhibitor:

ACE-Inhibitor = angiotensin converting enzyme inhibitor

DME = drug metabolizing enzyme

MAO = monamine oxidase

LD50 abbreviations follow the National Institute of Occupational Safety and Health (NIOSH) and the 1977 CRC *Phytotoxin Tables*, published in the CRC *Critical Reviews in Toxicology*:

LD50 = lethal dose at which 50% of experimental population is killed

LDlo = lowest reported lethal dose

Unfortunately, MLD has been used by different sources differently, *Merck* uses minimum lethal dose, some other sources use mean lethal dose, and some don't define it. LD50 data are reserved for the end position at the end of the recitation for each phytochemical. The LD50 is almost always given in mg/kg. The LD50 is often followed by a pair of three-letter abbreviations in lower case letters indicating the mode of administration (e.g., orl for oral and mus for mouse).

cat = cat

chd = child

ckn = chicken

dog = dog

frg = frog

gpg = guinea pig

unk = unknown
gvg = gavage
hmn = human
iar = intraarterial
ihl = inhalation
inf = infusion
ims = intramuscular
ipr = intraper.
inv = intravenous
mky = monkey
mus = mouse
orl = oral
par = parenteral
pgn = pigeon
rat = rat
rbt = rabbit
scu = subcutaneous
sup = suppository
uns = unspecified
wmn = woman

Where available, these three-letter abbreviations are strung out in pairs, without periods, e.g., orl rbt stands for orally in rabbits. Where human dosages are available, I use hmn, man, or wmn followed by a slash (/). Temporal abbreviations used include hr(s), day, wk(s), mo(s), and yr(s). In many cases, the doses are based on salts or halides of the natural compound rather than the straight compound. For these and other reasons, as well as numerous caveats, the reader must always consult the original sources. Dosages vary greatly, from edition to edition, of various sources. For example, one consulting early NIOSH editions will find an oral rat LD50 of 192 mg/kg body weight for caffeine. The most recent edition of the *Merck Index*, cited herein as M11, gives a higher LD50 for caffeine.

WARNING: This compendium of biologically active elements and compounds is a growing and tentative list of reputed biological activities which I have seen reported in the last decade. This is an unannotated compilation, *not* a prescription. The fact that an isolated element or compound has a given activity does not necessarily imply that a plant species containing that element or compound has the same activity. Most of the studies have been on animals or microorganisms *in vivo* or *in vitro*.

Readers are advised that animal studies cannot be reliably extrapolated to other animals or humans. Many of these compounds and the plants containing them may be poisonous. In many cases, lethal doses (LD50 or LD10) available to me have also been recorded (the information taken primarily from the *Handbook of Medicinal Herbs*, available from CRC Press).

Occasionally ADIs, acceptable daily intakes, from *Martindale's Extra*

Pharmacopoeia (MAR) are included. I have stretched Martindale's definition of acceptable daily intake, which strictly may have official connotations. These ADIs were often embracing several related compounds, and refer to the total of related compounds, not just the individual. See MAR! If Martindale even cited a dose that had been used, for example, mandelic acid, I included that under ADI, here better defined as annotated daily intake or acceptable drug intake, meaning that at one time or another, that dosage has been used. Readers are advised that in many cases, this compendium is a tertiary source drawn from good secondary sources like MAR, where both pro and con data are included, and from less reliable secondary sources, who select only the pro. Where Martindale cites conflicting evidence, I have occasionally so indicated with a question mark (?). Most human dosages in this compilation can be searched manually with WordPerfect, by searching for man/ indicating Martindale's human dosages. A typical Martindale dosage will be strung out as follows (where all the data bits are recognizable): Antidepressant 6–12 g/day/man/orl MAR. Accordingly, the entry for tryptophan, where data are cited, indicates that at 6 to 12 grams a day, orally in man (or woman for the smaller dosage), tryptophan may help depression. Some of these dosages are historical only, and no longer used. Again. Caution! We all know the perils of tryptophan contaminants. Dr. Herb Pierson, NCI, tells me there is some evidence that tryptophan may be carcinogenic (personal communication, Oct., 1991). Until I find a citable source, I have not included such pertinent information in the database(s). Consult a physician, not a botanist, before taking any medicine!

Searching the databases for tryptophan, I was pleasantly surprised to find that seeds of evening primrose (*Oenothera biennis*) had the highest figure, up to 16,000 ppm (1.6%) tryptophan on a dry-weight basis. I always recheck my sources on a superlative like this, making sure, through back calculations, that this high figure was what my source reported. I can be no more reliable than my sources. Similarly, when a printout showed that dandelion (*Taraxacum officinale*) flowers had the highest for lecithin in the database, I went back to *The Wealth of India* and confirmed my data. When cornsalad (*Valerianella locusta*) showed the highest figure for boron, 3 mg of which are reported to double blood levels of sex hormones, I went back to confirm my data. I had reported faithfully. Still, I did not believe the high figure. Hence I acquired seed, planted and harvested cornsalad, and submitted the material to USDA's Human Nutrition Research Center at Grand Forks, ND. Dr. Forrest Nielson's phone report of May 12, 1992 was disappointing, at least as far as cornsalad enthusiasts are concerned. My eastern-grown cornsalad showed only modest, not super, levels of boron, approximately 4 ppm. His analyses of my eastern-grown stinging nettle showed them to be ten times richer in boron than the cornsalad. This goes to show, once again, that the literature, though correctly cited, might lead one to incorrect conclusions. Analyses such as these are very expensive. Until all the plants are analyzed under the same environmental and experimental conditions, we can only use the numbers herein as rough approximations, leading, at best, to the right orders of magnitude.

In the three cases above, I had transcribed my data faithfully and accurately. In all candor, I should also reveal an unfaithful transcription. When I printed my entries for pyroxidine (vitamin B6), mango (*Mangifera indica*) had the highest figure, 73, almost ten times higher than other entries. I went back to *Agricultural Handbook No. 8-9* to verify. Alas, I had slipped a decimal. The figure should have read 7.3, not 73. I slipped in calculating the ZMB, also incorporating the margin of error. Surely, I have made other errors, and if the figure is not extreme, it may persist. Users should always check any figure important in any health strategem. There is both good and bad in the fact that I have located, calculated, and entered all these data personally. The good is: it makes the data a bit more even-handed; I calculated and rounded systematically. Different people would have interpreted things in different directions. The bad is: I made some typos. Hopefully, I caught most of these. But surely some typos persist. The numbers, both my tertiary transcriptions, and my secondary and original sources, must be checked before any major health or toxicity conclusions are reached.

For example, in 1991, a lawyer called from California and complained that he had spent two days trying to track down the source of a report in the NIOSH *Registry of Toxic Effects of Chemical Substances* (1977). The entry had dire consequences for several industries in chemophobic California. The entry implied that ammonia had an oral LD50 of 350. Of course, ammonia is a gas and could have inhalation toxicity but no oral LD50. The lawyer's calls to NIOSH finally revealed that they had derived their data from the CRC *Phytotoxin Tables* where, yes, I did report ammonia with an oral LD50 of 350, noting that I had drawn my data from NIOSH 1975. Finally, through interlibrary loan I received NIOSH 1975, where yes, NIOSH had reported LD50 of 350 for ammonia. Nonetheless, the lawyer wanted me to draft a letter saying that although I had faithfully quoted my source, I realized that ammonia should not have an oral LD50. In my same *Phytotoxin Tables*, I did introduce a serious error. Yohimbine mysteriously slipped a column, from Vinca to Viola, such that the CRC *Phytotoxin Tables* (1985) reported erroneously yohimbine for violets rather than for the correct periwinkles.

Recommended daily allowances (RDA) have also occasionally been included from the latest guide to RDAs. Where I have "RDA" in quotes, it is not the official U.S. RDA, but a suggested minimum daily dose from some other source, as indicated. Intrigued by a tabulation of potential toxic doses (PTDs) in the conservative *AARP Bulletin*, I elected to include them, to suggest conservative approaches to nutritional supplements. Under no circumstances should anyone take any dangerous phytochemical (or plants containing them), unless so advised by a physician. Antagonisms and synergisms are the rules rather than the exceptions. All plants, hence all cereals, fruits, grains, nuts and vegetables, contain carcinogens and poisons. And all contain nutrients, vitamins and essential minerals, not to mention anticarcinogens and antioxidants.

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ABELMOSCHUS ESCULENTUS
(L.) MOENCH

“OKRA”

ALANINE 730-7,300 FR USA
 ARGININE 840-8,450 FR USA EFN26:71
 ASCORBIC-ACID 190-2,340 USA
 ASH 7,000-70,000 FR USA
 ASH 47,400 SD WOI
 ASPARTIC-ACID 1,450-14,820 FR USA
 EFN26:71
 CALCIUM 810-8,100 FR USA
 CALCIUM 2,100 SD WOI
 CARBOHYDRATE 76,300-760,000 FR
 USA
 COPPER 1-9 FR USA
 CYANIDIN-3-GLUCOSIDE-4'-GLU-
 COSIDE FL RAA
 CYANIDIN-4'-GLUCOSIDE FL RAA
 CYSTINE 180-1,900 FR USA EFN26:71
 12,13-EPOXYOLEIC ACID SD WOI
 FAT 1,000-10,000 FR USA
 FAT 160,000-220,000 SD WOI
 FIBER 9,400-94,000 FR USA
 FIBER 210,200 SD WOI
 FOLACIN 0.7-10 FR USA
 GLUTAMIC-ACID 2,710-27,100 FR USA
 GLYCINE 440-4,400 FR USA
 GOSSYPETIN FL WOI
 GOSSYPOL 70 SD JAF38:506
 9-HEXADECENOIC-ACID SD WOI
 HISTIDINE 310-3,100 FR USA
 IRON 8-150 FR USA WOI
 ISOLEUCINE 550-6,900 FR US EFN26:71
 KCAL 180-3,800 FR USA EFN26:71
 LEUCINE 1,050-10,500 FR USA
 LINOLEIC-ACID 32,575-44,790 SD WOI
 LYSINE 810-8,100 FR USA
 MAGNESIUM 380-6,000 FR USA WOI
 MANGANESE 10-100 FR USA
 METHIONINE 210-2,100 FR USA
 MUFA 170-1,700 FR USA
 MYRISTIC-ACID 1,120-1,540 SD WOI
 NIACIN 10-100 FR USA
 OLEIC-ACID 72,864-100,190 SD WOI
 OXALIC-ACID 103 FR WBB
 PALMITIC-ACID 33,920-46,640 SD WOI
 PANTOTHENIC-ACID 2-24 FR USA
 PECTIN FR WOI
 PECTIN 21,500 SD WOI
 PENTOSANS 142,700 SD WOI
 PHENYALANINE 650-6,500 FR USA
 PHOSPHORUS 630-6,300 FR USA
 PHOSPHORUS 7,900 SD WOI

PHYTOSTEROLS 240-2,400 FR USA
 POTASSIUM 2,200-32,500 FR USA WOI
 POTASSIUM 8,200 SD WOI
 PROLINE 450-14,930 FR USA EFN26:71
 PUFA 270-2,700 FR USA
 QUERCETIN FL WOI
 RIBOFLAVIN 0.6-7 FR USA WOI
 PROTEIN 2,000-122,000 FR USA
 EFN26:71
 PROTEIN 193,800 SD WOI
 SERINE 440-4,510 FR USA EFN26:71
 SFA 260-2,600 FR USA
 SODIUM 10-1,000 FR USA WOI
 STARCH 89,200 SD WOI
 STEARIC-ACID 7,360-10,120 SD WOI
 SUGAR 40,300 SD WOI
 SULFUR 140-1,400 FR WOI
 THIAMIN 0.8-20 FR USA WOI
 THREONINE 650-6,500 FR USA
 ALPHA-TOCOPHEROL 310 OI WOI
 GAMMA-TOCOPHEROL 430 OI WOI
 TRYPTOPHAN 170-1,710 FR USA
 EFN26:71
 TYROSINE 480-8,700 FR USA EFN26:71
 VALINE 910-9,100 FR USA
 VIT-B5 2-22 FR USA
 WATER 880,000-895,000 FR USA WOI
 WATER 98,900 SD WOI
 ZINC 6-60 FR USA

ABELMOSCHUS MANIHOT (L.)
MEDIK.

“MANIOC HIBISCUS”

ASH 16,100-138,793 LF JAF38:2137
 CALCIUM 724-6,241 LF JAF38:2137
 COPPER 2.5-21.5 LF JAF38:2137
 FAT 17,700-152,586 LF JAF38:2137
 GLYCOLIPIDS 5,504-47,448 JAF38:2137
 IRON 33-284 LF JAF38:2137
 MAGNESIUM 564-4,862 LF JAF38:2137
 MUCILAGE RT WOI
 PHOSPHOLIPIDS 5,310-45,775
 JAF38:2137
 PROTEIN 22,000-190,000 LF JAF38:2137
 WATER 884,000 LF JAF38:2137
 ZINC 12.5-108 LF JAF38:2137

ABELMOSCHUS MOSCHATUS
MEDIK.

“AMBRETTE”

ACETIC-ACID
 AMBRETTOL

AMBRETTOLIC-ACID SD WOI
 AMBRETTOLIDE (7-HEXADECEN-16-
 OLIDE) SD WOI
 ALPHA-CEPHALIN SD 411/
 DECYL-ACETATE 350 SD BML
 DECYL-ALCOHOL 350 SD BML
 5-DODECENYL-ACETATE 1 SD BML
 EO 2,000-6,000 SD
 FARNESOL SD WOI
 FAT 164,000 SD
 FIBER 370,000 SD
 FURFURAL SD WOI
 KAEMPFEROL FL RAA
 KAEMPFEROL-3-GLUCOSIDE FL RAA
 METHIONINE-SULFOXIDE
 MUCILAGE RT WOI
 MYRICICETIN FL RAA
 MYRICICETIN-3'-GLUCOSIDE FL RAA
 MYRISTIC-ACID
 PALMITIC-ACID
 PHOSPHATIDYLSERINE SD 411/
 PHOSPHATIDYLSERINE
 PLASMALOGEN
 PHOSPHATIDYLCHOLINE-
 PLASMALOGEN
 PINEOL PL JSG
 PROTEIN 26,000 SD
 QUERCETIN FL RAA
 QUERCETIN-3-GLUCOSIDE FL RAA
 STARCH 150,000 SD
 5-TETRADECENYL-ACETATE 20 SD
 BML
 5-TETRADECEN-14-OLIDE 25 SD BML

ABIES ALBA MILLER

"SILVER-FIR"

ABIETIC-ACID (8-10%RE) HHB
 ABIETINOLIC-ACID (1.5-2%RE) HHB
 ALPHA-&-BETA-ABIETINOLIC-ACID
 (46-50%RE) HHB
 ABIETOSPIRONE PL JSG
 L-BORNYL-ACETATE LF GEO
 BORNYLENE 1-2 LF BML
 CAMPHENE 528-738 LF BML
 DELTA-3-CARENE 2-4 LF BML
 DELTA-3-CARENE (4.5%RE) HHB
 CYCLOFENCHENE 1 LF BML
 P-CYME NE 25-35 LF BML
 DECYLALDEHYDE LF GEO
 EO 2,500-3,500 LF GEO
 ALPHA-FENCHENE 50-70 LF BML
 BETA-FENCHENE 5-7 LF BML

LAEVOPIMARIC-ACID RE HHB
 LAURALDEHYDE LF GEO
 LIMONENE 855-1197 LF BML
 LIMONENE (53.5%RE) HHB
 L-LIMONENE LF GEO
 MALTOL CC0
 MYRCENE 25-35 LF BML
 NEOABIETINIC-ACID RE HHB
 PALUSTRINIC-ACID RE HHB
 ALPHA-PHELLANDRENE 5-7 LF BML
 BETA-PHELLANDRENE 32-46
 ALPHA-PINENE 590-826 BML
 ALPHA-PINENE (39%RE) HHB
 L-ALPHA-PINENE LF GEO
 BETA-PINENE 218-304 LF BML
 BETA-PINENE (3%RE) HHB
 SABINENE 5-7 LF BML
 SALICYLIC-ACID PL JSG
 SANTENE 45-63 LF BML GEO
 SUCCINIC-ACID (0.05-0.08%RE) HHB
 GAMMA-TERPINENE 8-10 LF BML
 TERPINOLENE 28-38 LF BML
 ALPHA-THUJENE LF BML
 TRICYCLEN E 45-63 LF BML

ABIES BALSAMEA (L.) MILLER

"BALSAM FIR"

ABIENOL PL JSG
 ABIESLACTONE PL JSG
 ANDROL
 BORNYL-ACETATE 950-2,045 PL JAD
 BUPLEUROL
 CAMPHENE 440-950 PL JAD
 3-CARENE 720-1,550 PL JAD
 DEHYDROJUVA BIONE HHB
 4,4-DIMETHYLCYCLOHEPT-2-EN-1-OL
 PL JAD
 EO 6,500-14,000 LF
 JUVA BIONE HHB
 LIMONENE 720-1,550 PL JAD
 MUCILAGE
 ALPHA-PHELLANDRENE PL JSG
 BETA-PHELLANDRENE GUM
 ALPHA-PINENE 545-5,050 PL JAD
 RESIN (70-80% GUM)

ABIES SACHALINENSIS

MASTERS

"SHIN-YO-YU; JAPANESE FIR"

BORNEOL 3,360-3,780 BR GEO
 CAMPHENE 4,160-4,680 BR GEO

EO 16,000-18,000 BR GEO
 ALPHA-PINENE 2,400-2,700 BR GEO
 TODOMATUIC-ACID PL JSG

ABRUS PRECATORIUS L.

“CRAB’S EYE”
 “JEQUERITY”

ABRALINE SD CRC
 ABRASINE PL JSG
 ABRICIN PL JSG
 ABRIN SD CRC
 (+)-ABRINE PL JSG
 ABRISIN PL JSG
 ABRUSGENIC-ACID PL JSG
 ABRUSGENIC-ACID-METHYL-ESTER
 PL JSG
 ABRUSLACTONE PL JSG
 ABRUSSIC-ACID PL CRC
 ANTHOCYANINS SD HHB
 ASH 17,000-81,000 LF CRC
 CALCIUM 1,266-2,660 LF CRC
 CAMPESTEROL SD CRC
 CARBOHYDRATES 137,000-652,000 LF
 CRC
 CHOLINE SD MPI
 P-COUMAROYL GALLOYL-
 GLUCODELPHINIDIN PL JSG
 CYCLOARTENOL SD CRC
 DELPHINIDIN PL JSG
 N,N-DIMETHYL-TRYPTOPHAN
 SD CCO
 N,N-DIMETHYL-TRYPTOPHAN-METHO-
 CATION-METHYL-ESTER SD CCO
 FAT 28,000 SD CRC
 FIBER 37,000-176,000 LF CRC
 GALLIC-ACID SD HHB
 GLICYRRHIZIN 100,000 LF HHB
 GLICYRRHIZIN 12,500 RT CRC
 HYPAPHORINE SD HHB
 KILOCALORIES 620-2,950 LF CRC
 PECTIN SD HHB
 PENTOSANS 92,100 SD HHB
 PHOSPHORUS 650-3,095 LF CRC
 PICATORINE SD MPO
 POLYGALACTURONIC-ACIDS 58,600
 SD HHB
 PRECASINE SD JSG
 PRECATORINE SD CCO
 PROTEIN 56,000-267,000 LF CRC
 PROTEIN 194,000 SD CRC
 TRIGONELLINE SD MPI
 WATER 790,000 LF CRC

ACACIA CATECHU (L. f.) WILLD.

“CATECHU; BLACK CUTCH”

(-)-ACACATECHIN PEP
 ACETALDEHYDE PEP
 (+)-AFZELICHIN PEP
 ALDOBIURONIC-ACID PEP
 ALPHA-AMINO-BETA-OXALYLAMINO-
 PROPIONIC-ACID PEP
 D-ARABINOSE PEP
 ASH 98,000 LF CRC
 3-(BETA-L-ARABOPYRANOSIDE)-L-
 ARABINOSE PEP
 BORON PEP
 CALCIUM 27,400 LF CRC
 CARBOHYDRATES 726,000 LF CRC
 ALPHA-CATECHIN PEP
 BETA-CATECHIN PEP
 GAMMA-CATECHIN PEP
 CATECHINS 25,000-330,000 EX 411/
 DL-CATECHOL PEP
 CATECHUIC-ACID EXPECTORANT PEP
 CATECHUTANNIC-ACID (20-50%GUM)
 AYL
 COBALT PEP
 DIAMINO-ACID PEP
 DIHYDROKAEMFEROL PEP
 DL-EPICATECHIN AYL
 L-EPICATECHIN AYL
 (-)-EPICATECHOL PEP
 EX ST HYPOTENSIVE; VASODILATOR
 FAT 46,000 LF CRC
 FIBER 226,000 LF CRC
 FISETIN AYL 411/
 FLAVOTANNIN PEP
 FORMALDEHYDE
 D-GALACTOSE PEP
 GALLIC-ACID PEP
 GALLOTANNIN PEP
 GLUCOSE PEP
 GLUCOSYLURONIC-ACID PEP
 D-GLUCURONIC-ACID PEP
 GUM PEP
 4-HYDROXYPIPECOLIC-ACID PEP
 ISOACACATECHIN PEP
 ISORHAMNETIN PEP
 ISOVALERALDEHYDE PEP
 KAEMFEROL PEP
 L-LEUCOMACLURIC-GLYCOL-ETHER
 PEP
 MAGNESIUM PEP
 MALATE-DEHYDROGENASE
 MANGANESE PEP

8-METHOXYFISSETIN PEP
 3-METHOXYFLAVONES PEP
 8-METHOXYFLAVONE-3,4-DIONES
 4-(4-O-METHYL-ALPHA-D-
 GLUCURONOSIDE)-L-ARABINOSE PEP
 PEROXIDASE PEP
 PHLOBATANNIN PEP
 PHOSPHATASE PEP
 PHOSPHORUS 1,700 LF CRC
 PROCYANIDIN PEP
 PROTEIN 130,000 LF CRC
 QUERCETAGETIN PEP
 QUERCETIN AYL
 QUERCITRIN PEP
 L-RHAMNOSE PEP
 RUTIN PEP
 SILICON PEP
 TANNIN PEP
 TAXIFOLIN PEP
 7,8,3',4'-TETRAHYDROXY-3-
 METHOXYFLAVONE PEP
 7,3',4'-TRIHYDROXY-8-
 METHOXYFLAVONOL PEP
 7,3,4-TRIHYDROXY-3,8-
 DIMETHOXYFLAVONE PEP
 7,8,4-TRIHYDROXY-3-
 METHOXYFLAVONE
 7,8,14'-TRIHYDROXYFLAVONOL PEP
 URONIC-ACID
 5-(BETA-D-XYLOPYRANOSIDE)-L-
 ARABINOSE PEP
 D-XYLOSE PEP

***ACACIA DECURRENS* (WENDL.)
 WILLD.**

"GREEN WATTLE"

ACETIC-ACID PEP
 ALDOBIONIC-ACID PEP
 ANTHOCYANIDIN PEP
 ANTHOCYANILIDINE PEP
 L-ARABINOSE PEP
 ASH 38,000 SD CRC
 CARBOHYDRATE PEP
 BETA-CAROTENE
 (+)-CATECHIN PEP
 ALPHA-CELLULOSE PEP
 CELLULOSE PEP
 FAT 123,000 SD CRC
 FIBER PEP
 FISETINIDIN PEP
 FRUCTOSE PEP
 D-GALACTURONIC-ACID PEP

GALLIC-ACID PEP
 GALLOCATECHIN PEP
 D-GLUCOSE PEP
 INDOLEACETICACID PEP
 LIGNIN PEP
 D-MANNOSE PEP
 MEARNSITRIN PEP
 METHANOL PEP
 3-O-METHYL-L-RHAMNOSE PEP
 METHYLSALICYLIC-ESTER PEP
 PELARGONIDIN PEP
 3,3',4,4',7'-PENTAHYDROXYFLAVAN PEP
 3,3',4',5',7'-PENTAHYDROXY-2-
 PHENYLCHROMAN PEP
 PHLOBAPHENE PEP
 PHLOBAPHENE-ANHYDRIDE PEP
 PHLOROGLUCINOL PEP
 D-PINETOL PEP
 PROANTHOCYANIDIN PEP
 PROTEIN 212,000 SD CRC
 PROTOCATECHUIC-ACID PEP
 L-RHAMNOSE PEP
 ROBINETIN PEP
 RUTIN PEP
 7,3',4',5'-TETRAHYDROXY-FLAVAN-3-
 OL-CATECHIN PEP
 XANTHOPHYLL PEP

***ACACIA FARNESIANA* (L.)
 WILLD.**

"CASSIE; HUISACHE"

N-ACETYL-DJENKKOLIC-ACID
 PL RAA
 ALANINE 3,440-18,450 LF CRC
 AMINO-ACIDS
 ANISALDEHYDE FL RAA
 APIGENIN-6,8-BIS-BETA-D-
 GLUCOPYRANOSIDE PL RAA
 ARGININE 7,360-39,480 LF CRC
 AROMADENDRIN PL RAA
 ASCORBIC-ACID 490-2,636 LF CRC
 ASH 10,000-53,800 LF CRC
 ASPARTIC-ACID 7,040-37,770
 BENZALDEHYDE FL PEP
 BENZOIC-ACID FL PEP
 BENZYL-ALCOHOL FL AYL
 BUTYRIC-ACID FL PEP
 CALCIUM 930-5,003 LF CRC
 CALCIUM 3,900-5,500 SD CRC
 CAMPESTEROL SD JAD PEP
 CARBOHYDRATES 90,000-484,200 LF
 CRC

CARBOHYDRATES 730,000-770,000 SD CRC
 BETA-CAROTENE 120-646 LF CRC
 (+)-CATECHOL PL JSG
 CHOLESTEROL SD JAD PEP
 COUMARIN FL JAD PEP
 P-CRESOL FL GEO
 CRESOLS PEP
 CUMINALDEHYDE FL JAD PEP
 CUMINIC-ALCOHOL FL RAA
 CYSTINE 700-750 SD RAA
 DECYLALDEHYDE FL JAD PEP
 M-DIGALLIC-ACID PL RAA
 DIHYDROACTINIDIOLIDE FL AYL
 EICOSANE FL JAD PEP
 ELLAGIC-ACID PL RAA
 EO 5,000-50,000 FL GEO
 ETHYL-ESTER PEP
 ETHYL-PHENOL FL GEO
 EUGENOL FL CRC
 FARNESOL FL JAD PEP
 FAT 6,000-32,280 LF CRC
 FAT 23,000-78,000 SD CRC
 FIBER 57,000-306,000 LF CRC
 GALLIC-ACID PL JSG
 (+)-GALLOCATECHOL PL JSG
 BETA-GERANIOL FL JAD PEP
 GERANIOL FL AYL
 GERANYL-ACETATE FL AYL
 GLUTAMIC-ACID 10,080-54,070 LF CRC
 GLYCINE 2,720-14,590 LF CRC
 HCN 0-4.495 UMOL/G LF RAA
 HISTIDINE 1,840-9,870 LF CRC
 HYDROXYACETOPHENONE PEP
 4-HYDROXYPIPECOLIC-ACID PL RAA
 ALPHA-IONONE FL AYL
 BETA-IONONE FL RAA
 IRON 37-199 LF CRC
 ISOLEUCINE 2,800-15,020 LF CRC
 ISOLEUCINE 1,075-1,100 SD RAA
 ISORHAMNETIN-3-RUTINOSIDE PL JSG
 KAEMPFEROL PL RAA
 KAEMPFEROL-7-GALLOYLGLUCOSE PL RAA
 KAEMPFEROL-7-GLUCOSIDE PL RAA
 LEUCINE 6,000-32,190 LF CRC
 LEUCINE 3,700-3,750 SD RAA
 LINALOOL FL JAD PEP
 LINALYL-ACETATE FL JAD PEP
 LINAMARIN PL RAA
 LOTAUSTRALIN PL RAA
 LYSINE 3,760-20,170 LF CRC
 LYSINE 1,750-1,800 SD RAA
 METHIONINE 700-3,860 LF CRC

METHIONINE 175-200 SD RAA
 3-METHYL-3-Z-DECEN-1-OL FL JAD PEP
 CIS-3-METHYL-DEC-3-EN-1-OL FL AYL
 CIS-3-METHYL-DEC-3-ENOIC-ACID FL AYL
 TRANS-3-METHYL-DEC-4-ENOIC-ACID FL AYL
 3-METHYL-3-E-NONEN-1-OIC-ACID FL JAD PEP
 3-METHYL-3-Z-NONENOIC-ACID FL JAD PEP
 N-METHYL-BETA-PHENETHYLAMINE FL JAD PEP
 METHYL-EUGENOL FL CRC
 METHYL-GALLATE PL RAA
 METHYL-SALICYLATE FL CRC
 MUCILAGE PEP
 MYRICETIN-4'-METHYLETHER-3-RHAMNOSIDE PL JSG
 NARINGENIN-7-GLUCOSIDE PL RAA
 NARINGENIN-7-RHAMNOGLUCOSIDE PL RAA
 NEROLIDOL FL AYL
 NIACIN 85-457 LF CRC
 NITROGEN 12,800-68,800 LF CRC
 NONACOSANE FL JAD PEP
 PALMITIC-ACID FL GEO
 PHENYLALANINE 2,800-15,020 LF CRC
 PHENYLALANINE 1,450-1,500 SD RAA
 PHOSPHORUS 840-4,519 LF CRC
 PHOSPHORUS 2,000-2,700 SD CRC
 PIPECOLIC-ACID PL RAA
 PROLINE 4,080-21,890 LF CRC
 PROTEIN 80,000-430,000 LF CRC
 PROTEIN 209,000-550,000 SD CRC
 PRUNIN-O-6"-GALLATE PL RAA
 QUERCETIN-3-RUTINOSIDE PL JSG
 RIBOFLAVIN 2-9 LF CRC
 SALICYLIC-ACID PEP
 SERINE 3,280-17,600 LF CRC
 SITOSTEROL SD JAD PEP
 ALPHA-SPINASTEROL SD JAD PEP
 STIGMASTEROL SD JAD PEP
 TANNINS 110,000-322,000 FR RAA
 ALPHA-TERPINEOL FL GEO
 THIAMIN 2-11 LF CRC
 THREONINE 2,000-10,730 LF CRC
 THREONINE 1,050-1,100 SD RAA
 TRIACONTANOL LF RAA
 TRYPTOPHAN 440-450 SD RAA
 TYRAMINE PL RAA
 TYROSINE 2,240-12,010 LF CRC
 VALINE 3,120-16,740 LF CRC

VALINE 1,600-1,650 SD RAA
WATER 814,000 LF CRC

ACACIA LEUCOPHLOEA (ROXB.)
WILLD.

“PILANG BAST”

GLYCOSIDE PEP
BETA-AMYRIN PEP
BETULINIC-ACID-3-O-MALTOSE PL
JSG
HCN PEP
LEUCOPHLEOL PEP
LEUCOPHLEOXOL PEP
LEUCOXOL PEP
MYRICETIN PEP
N-OCTACOSANOL PEP
TANNIN PEP

ACACIA MELANOXYLON R. BR.

“BLACKWOOD”

ACAMELIN PL JSG
ACETIC-ACID PEP
ANTHOCYANIDINS PEP
CACHOUTANNIN-ACID(SIC) PEP
CELLULOSE PEP
2,6-DIMETHOXY-1,4-BENZOQUINONE
PEP
FAT 76,000 SD CRC
FLAVAN-3,4-DIOL
GIBBERELIC-ACID PEP
HYPEROSIDE PEP
LEUCOANTHOCYANINS
METHANOL PEP
6-METHOXY-2-METHYL-3,5-
DIHYDROBENZOFURANO-4,7-DIONE
PEP
2-METHYL-6-METHOXY-
FURANOBENZOQUINONE
PHLOBAPHENE PEP
PROTEIN 394,000 SD CRC
TANNIN PEP

ACACIA NILOTICA (L.) WILLD.
EX DELILE

“BABUL”

ALDOBIONIC-ACID PEP
ALDOBIOTRIOURONIC-ACID PEP
4-ALDOBIOURONIC-ACID PEP
ALUMINUM PEP

M-AMINOPHENYL-GLYCOSIDE PL
RAA
AMYLASE PEP
BETA-AMYRIN RT RAA
ARABIC-ACID
ARABINOSE FR RAA
ARABINOFURANOSYL-L-ARABINOSE
RE RAA
2-O-BETA-L-ARABINOFURANOSYL-L-
ARABINOSE PEP
3-O-BETA-L-ARABINOPYRANOSYL-L-
ARABINOSE RE RAA
L-ARABINOSE PEP
ASCORBIC-ACID PEP
ASCORBIC-ACID-OXIDASE PEP
ASH 40,000-54,000 SD RAA
BETULIN PEP
CALCIUM PEP
CARBOHYDRATES PEP
BETA-CAROTENE PEP
(+)-CATECHIN PEP
D-CATECHOL PEP
CELLULOSE PEP
CHLOROGENIC-ACID PEP
7-COUMARINYL-ACID PL RAA
DIASTASE PEP
(-)-DICATECHIN PEP
DICATECHOL PEP
M-DIGALLIC-ACID BK RAA
DIGITONIN PEP
ELLAGIC-ACID BK RAA
EPICATECHOL PEP
EPICATECHOL-GALLATE PEP
(-)-EPIGALLOCATECHIN
EX BK FR ALGICIDE; MOLLUSCICIDE
FAT 35,000-115,000 SD RAA
FIBER 25,000-166,000 SD RAA
FRUCTOSE PEP
D-GALACTOSE PEP
GALACTURONIC-ACID PEP
GALLIC-ACID RE HHB
(+)-GALLOCATECHOL PL JSG
GLUCOSE FR RAA
D-GLUCURONIC-ACID PEP
HYDROQUINONE PL RAA
6-HYDROXYQUINOLINE PL RAA
7-HYDROXYQUINOLINE PL RAA
8-HYDROXYQUINOLINE PL RAA
INDOLEACETICACID PEP
ISOQUERCITRIN PEP
ISORHAMNETIN-3-RUTINOSIDE PL JSG
KAEMPFEROL-3-GLUCOSIDE PEP
KAURENIC-ACID PL RAA
LACTONE

(+)-LEUCOCYANIDIN PEP
 (3)-LEUCOCYANIDIN-GALLATE PEP
 LIGNIN PEP
 LINOELIC-ACID PEP
 LYSOLECITHIN PEP
 MAGNESIUM PEP
 MALIC-ACID PEP
 MALTASE PEP
 MANGANESE PEP
 MONOBUTYRINASE PEP
 MUCILAGE PEP
 MYRECETIN-4'-METHYLETHER-3-
 RHAMNOSIDE PL JSG
 OCTACOSANOL RT RAA
 OLEIC-ACID PEP
 OXALIC-ACID PEP
 OXIDASE PEP
 PEROXIDASE PEP
 PHLOBAPHENE PEP
 PHLOBATANNIN PEP
 PHLOROGLUCINOL PL RAA
 POLYPHENOL-OXIDASE PEP
 POTASSIUM
 PROTEIN 136,000-452,000 SD CRC RAA
 PROTOCATECHUIC-ACID FR RAA
 (+)-PYROCATECHOL PEP
 PYROGALLOL PL RAA
 QUERCETIN PEP
 QUERCETIN-3-RUTINOSIDE PL JSG
 QUERCITRIN PEP
 3-QUINOLYL-ACID PL RAA
 RAFFINOSE SD RAA
 RHAMNOSE FR RAA
 RIBOFLAVIN PEP
 ROBIDANDIOL PEP
 ROSIN PEP
 SAPONIN PEP
 SILICON PEP
 ALPHA-SITOSTEROL PEP
 SODIUM PEP
 SUCROSE SD RAA
 TANNASE PEP
 TANNIN 271,00 BK RAA
 TANNIN 349,500 FR RAA
 TANNIN 170,000-200,000 RE HHB
 TANNIN 66,100 SD RAA
 TANNIN 63,500 WD RAA
 3',4',5,7-TETRAHYDROXYFLAVAN-3-OL
 FR RAA
 3',4',5,7-TETRAHYDROXYFLAVAN-3-
 OL(-)-EPICATECHOL FR RAA
 3',4',7,8-TETRAHYDROXYFLAVONOID
 PEP
 THIAMIN PEP

3',4',7-TRIHYDROXYFLAVAN-3,4-DIOL
 FR RAA
 4',7,8-TRIHYDROXYFLAVONOID PEP
 URONIC-ACID PEP
 XANTHURENIC-ACID PL RAA
 XYLOSE FR RAA

ACACIA SENEGAL (L.) WILLD.

"GUM ARABIC"

BETA-AMYRIN BK CCO
 ARABIC-ACID PEP
 ARABINOSE PEP
 L-ARABINOSE
 ASCORBIC-ACID PEP
 ASH 71,000 FR CRC
 ASH 84,000 LF CRC
 ASH 58,000 SD CRC
 ASPARTIC-ACID PEP
 BETULIN RT CCO
 CALCIUM 13,200 LF CRC
 CALCIUM 7,500 LF CRC
 CARBOHYDRATES 699,000 FR CRC
 CARBOHYDRATES 667,000 LF CRC
 CARBOHYDRATES 491,000 SD CRC
 CERYL-ALCOHOL RT CCO
 CYSTEINE PEP
 DIMETHYLTRYPTAMINE PEP
 ERYTHRODIOL PEP
 FAT 10,000 FR CRC
 FAT 67,000 LF CRC
 FAT 58,000 SD CRC
 FIBER 390,000 FR CRC
 FIBER 112,000 LF CRC
 FIBER 137,000 SD CRC
 D-GALACTOSE PEP
 D-GLUCOSIDE PEP
 GALACTOGLUCURONIC-ACID PEP
 GLUCURONIC-ACID PEP
 HCN PEP
 HENTRIACONTANE PEP
 N-HENTRIACONTANE LF CCO
 HENTRIACONTANOL PEP
 HENTRIACONTAN-1-OL LF CCO
 KAEMPFEROL PEP
 LEUCINE PEP
 MAGNESIUM
 4-METHOXYGLUCURONIC-ACID
 N-NONACOSANE LF CCO
 OCTACOSAN-1-OL BK FL WD CCO
 OCTACOSANOL PEP
 PEROXIDASE PEP
 PHOSPHORUS 1,400 LF CRC
 PHOSPHORUS 3,100 SD CRC

D-PINITOL LF CCO
 POTASSIUM
 QUERCETIN
 RHAMNOSE PEP
 L-RHAMNOSE
 RHAMNOSE-HYDRATE PEP
 SERINE PEP
 SITOSTEROL PEP
 BETA-SITOSTEROL PEP
 BETA-SITOSTEROL-3-O-BETA-D-
 GLUCOSIDE FL CCO
 BETA-SITOSTEROL-D-GLUCOSIDE PEP
 SODIUM
 SUCROSE PEP
 TANNIN PEP
 URONIC-ACID PEP
 UVAOL BK CCO
 VALINE PEP

ACACIA TORTILIS (FORSSK.)
 HAYNE

“UMBRELLA THORN”

N-ACETYLDJENKOLIC-ACID SD RIZ
 ALDOBIOURONIC-ACID GUM RIZ
 APIGENIN-6,8-BIS-C-GLUCOSIDE LF
 RIZ
 ASH 51,000-57,000 FR CRC RIZ
 ASH 87,000 LF CRC
 ASH 59,000 SD CRC
 CALCIUM 7,900 FR CRC
 CALCIUM 22,700 LF CRC
 CALCIUM 5,600 SD CRC
 CARBOHYDRATES 462,500-739,000 FR
 CRC RIZ
 CARBOHYDRATES 660,000 LF CRC
 CARBOHYDRATES 506,000 SD CRC
 (+)-CATECHOL PL JSG
 DJENKOLIC-ACID SD RIZ
 FAT 24,400-31,000 FR CRC RIZ
 FAT 61,000 LF CRC
 FAT 60,000 SD CRC
 FIBER 201,000-248,000 FR CRC RIZ
 FIBER 116,000 LF CRC
 FIBER 109,000 SD CRC
 FLAVONOIDS 22,000-63,000 LF RIZ
 GALLIC-ACID PL JSG
 (+)-GALLOCATECHOL PL JSG
 HCN LF RIZ
 4-HYDROXY-PIPECOLIC-ACID SD RIZ
 ISORHAMNETIN-3-RUTINOSIDE LF RIZ
 LUTEOLIN-7-GLUCOSIDE LF RIZ

MYRICETIN-4'-METHYLEETHER-3-
 RHAMNOSIDE LF RIZ
 PHOSPHORUS 3,400 FR CRC
 PHOSPHORUS 1,700 LF CRC
 PHOSPHORUS 7,300 SD CRC
 PIPECOLIC-ACID LF RIZ
 PROTEIN 173,000-188,300 FR CRC RIZ
 PROTEIN 192,000 LF CRC
 PROTEIN 378,000 SD CRC
 QUERCETIN-3-GLUCOSIDE LF RIZ
 QUERCETIN-4'-GLUCOSIDE LF RIZ
 QUERCETIN-3-RUTINOSIDE LF RIZ
 TANNIN BK LF RIZ

ACALYPHA INDICA L.

“INDIAN ACALYPHA”

“CANCER HERB”

ACALYPHAMIDE PL JSG
 ACALYPHINE PL CRC
 AURANTIAMIDE PL RAA
 CALCIUM-OXALATE LF CRC
 HCN 2,700 LF HHB
 1-INOSITOLMONOMETHYLEETHER LF
 HHB
 2-METHYLANTHRAQUINONE
 PL RAA
 QUEBRACHITOL PL CRC
 RESIN PL CRC
 GAMMA-SITOSTEROL-ACETATE PL
 MPI
 BETA-SITOSTEROL-BETA-D-GLU-
 COSIDE PL RAA
 SUCCINIMIDE PL RAA
 TANNIN PL CRC
 TRIACETONAMINE PL CRC
 TRI-O-METHYL-ELLAGIC-ACID PL
 RAA

ACANTHOPANAX GRACILISTYLIS

W.W.SMITH

“WU CHIA PI”

ARACHIDIC-ACID PL CCO
 ARSENIC 0.23 RT BK CAL
 CALCIUM 12,600 RT BK CAL
 COPPER 14 RT BK CAL
 IRON 250 RT BK CAL
 LINOLEIC-ACID PL CCO
 MAGNESIUM 2,840 RT BK CAL
 MANGANESE 74 RT BK CAL
 MERCURY 0.11 RT BK CAL

4-METHOXY-SALICYLALDEHYDE RT
BK CCO
PALMITIC-ACID PL CCO
POTASSIUM 15,300 RT BK CAL
SODIUM 463 RT BK CAL
ZINC 19 RT BK CAL

ACHILLEA MILLEFOLIUM L.

"YARROW"

8-ACETOXYARTABIN
ACETYL-BALCHANOLIDE PL JSG
ACHICEINE PL 411/
ACHILLEINE PL PED
ACHILLETINE PL JSG
ACHILLICIN PL 411/
ACHILLIN PL HHB
ACONITIC-ACID PL HHB
ALUMINUM 34 PL PED
8-ANEOXYARTABIN
APIGENIN PL HHB
APIGENIN-GLUCOSIDE PL HHB
ARABINOSE PL PED
ARTEMITIN PL 411/
ASCORBIC-ACID 580-3,100 LF HHB
ASH 100,000-125,000 PL CRC PED
ASPARAGINE PL HHB
AUSTRICIN
AZULENE 0-7,140 LF BML GEO HHB
BALCHANOLIDE PL 411/
BENZALDEHYDE-CYANHYDRINGLYCOSIDE
PL HHB
BETAINE
BETONICINE PL PED
BORNEOL 6-275 LF BML HHB
BORNYL-ACETATE PL HHB
BUTYRIC-ACID PL HHB
DELTA-CADINENE 0.2-8 LF BML
CAFFEIC-ACID PL HHB
CALCIUM 8,670 PL PED
CAMPHENE 15-600 LF BML
CAMPHOR 45-1780 LF BML 411/
CARBOHYDRATES 713,000-752,000 PL
CRC PED
BETA-CAROTENE TR PL PED
CARYOPHYLLENE 4-160 LF BML
CASTICIN PL 411/
CEROTINIC-ACID PL HHB
CHAMAZULENE 50-2,800 PL BML HHB
CHAMAZULENE-CARBOXYLIC-ACID
PL HHB
CHOLINE PL PED
CHROMIUM 25 PL PED

CINEOLE PL PED
1,8-CINEOLE 24-960 LF BML
COBALT 31 PL PED
COPAENE 1.5-60 LF BML
COUMARINS
CUMINALDEHYDE 0.3-11 LF BML
P-CYMENE 9-370 LF BML
DEACETYLMATRICALIN
CIS-DEHYDROMATRICALIAESTER LF
HHB
TRANS-DEHYDROMATRICALIAESTER
LF HHB
2,3-DIHYDROACETOXYMATRICIN
DULCITOL PL PED
EO 700-5,000 FL GEO HHB
EO 250-14,000 LF BML HHB
EUGENOL PL 411/
FARNESENE PL 411/
FAT 18,000-40,000 PL CRC PED
FAT 223,000-334,000 SD CRC
FIBER 69,000-201,000 PL CRC PED
FOLIC-ACID
FORMIC-ACID PL HHB
FURFURAL
FURFURYL-ALCOHOL
GALACTOSE PL PED
GLUCOSE PL PED
GUAIAZULENE PL 411/
HEPTADECANE PL PED
HOMOSTACHYDRINE
HUMULENE 0.5-22 LF BML JAD
HYDROXYACHILLIN PL 411/
5-HYDROXY-3,6,7,4'-
TETRAMETHOXYFLAVONE PL JSG
INOSITOL PL PED
INULIN PL HHB
IRON TR PL PED
ISOARTEMISIA-KETONE
ISOBUTYL-ACETATE
ISORHAMNETIN
ISOVALERIC-ACID PL HHB
KILOCALORIES 2,900 PL PED
LEUCODIN PL 411/
LIMONENE 4-170 LF BML HHB
LUTEOLIN PL 411/
LUTEOLIN-7-GLUCOSIDE PL HHB
MAGNESIUM 1,920 PL PED
MANGANESE 50 PL PED
MANNITOL PL PED
MENTHOL
MILLEFIN PL 411/
MILLEFOLIDE PL 411/
MOSCHATINE PL 411/

MYRCENE 0.5-20 LF BML JAD 411/
 MYRISTIC-ACID PL HHB
 NIACIN TR PL PED
 ALLO-OCIMENE 4-140 LF BML
 OLEIC-ACID PL HHB
 PALMITIC-ACID PL HHB
 PENTACOSANE PL PED
 PHOSPHORUS 2,950 PL PED
 ALPHA-PINENE 25-1,000 LF BML HHB
 BETA-PINENE 18-720 LF BML HHB
 PONTICAPOXIDE PL HHB
 POTASSIUM 17,800 PL PED
 PROAZULENE
 PROTEIN 108,000-144,000 PL CRC PED
 PROTEIN 286,000-369,000 SD CRC
 QUERCETIN PL 411/
 QUERCETIN-GLYCOSIDE
 QUERCITRIN
 RESIN 6,000 PL HHB
 RIBOFLAVIN 5-6 PL PED
 RUTIN PL 411/
 SABINENE 30-1,225 LF BML 411/
 SALICYLIC-ACID PL 411/
 SELENIUM 16 PL PED
 SILICON 45 PL PED
 BETA-SITOSTEROL PL PED
 BETA-SITOSTEROL-ACETATE PL PED
 SODIUM 82 PL PED
 STACHYDRINE PL PED
 STIGMASTEROL
 SUCCINIC-ACID
 TANNIN 28,000 PL HHB
 ALPHA-TERPINENE 3-130 LF BML
 GAMMA-TERPINENE 9-370 LF BML
 TERPINEN-4-OL 10-430 LF BML
 TERPINEOL PL BML 411/
 THIAMIN TR PL PED
 THUJONE PL BML 411/
 ALPHA-THUJONE
 TIN 26 PL PED
 TRICOSANE PL PED
 TRICYCLEN 0.6-27 LF BML
 TRIGONELLINE PL PED
 VIBURNITOL
 WATER 823,000 PL PED
 ZINC TR PL PED

1/PED=Pedersen, M. 1987. Nutritional
 Herbology. Pedersen Publishing, Bountiful,
 UT 84010. 377 pp. (Seems to represent
 new data, at least as regards minerals;
 selenium, cobalt, chromium often appear
 high, in general; zinc, relatively low; all
 PED and JEL data are ZMB=zero-

moisture-basis). BML percentages
 multiplied by 250-10,000 ppm and rounded
 to get fresh and dry weights.

ACHILLEA MOSCHATA JACQ.

"IVA"

ACHILLEIN PL HHB
 ACHILLETINE PL JSG
 BORNYL-ACETATE 207-414 PL GEO
 BORNEOL 927-1,854 PL GEO
 L-CAMPHOR PL HHB
 CHAMAZULENE PL GEO
 CINEOLE 687-1,374 PL GEO HHB
 EO 3,000-6,000 PL HHB
 IVAIN PL HHB
 IVAOL PL GEO
 1-METHYL-PIPECOLIC-ACID-
 METHYLBETAINE PL HHB
 MOSCHATINE PL JSG
 MOSCHETIN PL HHB
 PALMITIC-ACID PL HHB
 PARAFFIN PL GEO
 VALERALDEHYDE PL HHB

ACHYRANTHES ASPERA Blume

"CHAFF FLOWER"

ACHYRANTHINE PL MPI
 BETAINE RT MPI
 ECDYSTERONE SH CCO
 GALACTOSE PL HHB
 GLUCOSE PL HHB
 HENTRIACONTANE SD HHB
 OLEANOLIC-ACID PL HHB
 RHAMNOSE PL HHB
 SAPOGENINS PL HHB
 XYLOSE PL HHB

ACHYRANTHES BIDENTATA

Blume

"CHAFF FLOWER"

ARSENIC 0.26 RT CAL
 BETAINE RT CCO
 CALCIUM 1,130-52,200 RT CAL SMO
 COPPER 6-11 RT CAL SMO
 ECDYSTERONE RT CCO
 GABA RT CCO
 INOKOSTERONE RT CCO
 IRON 150-180 RT CAL SMO
 MAGNESIUM 1,440-5,730 RT CAL SMO
 MANGANESE 40-66 RT CAL SMO

OLEANOLIC-ACID FR HHB
 PONASTEROSIDE-A RT CCO
 POTASSIUM 5,000-20,000 RT CAL SMO
 POTASSIUM-OXALATE RT CCO
 POTASSIUM-SUCCINATE RT CCO
 SODIUM 133-198 RT CAL SMO
 BETA-SITOSTEROL RT CCO
 BETA-SITOSTEROL-GLYCOSIDE RT
 CCO
 STIGMASTEROL RT CCO
 STIGMASTEROL-GLYCOSIDE RT CCO
 ZINC 16-51 RT CAL SMO

ACOKANTHERA SCHIMPERI
 SCHWEINF.

“ARROW-POISON TREE”

ACOLONGIFLOROSIDE WD CRC
 ACOLONGIFLOROSIDE-G 37 SD CRC
 ACOLONGIFLOROSIDE-H 9,800 SD CRC
 ACOLONGIFLOROSIDE-H-ACETATE
 240 SD CRC
 ACOSCHIMPEROXIDES WD CRC
 ACOVENOSIDE-A 3,000-17,000 SD CRC
 OUABAIN 1,000-5,000 SD CRC
 OUABAIN 2,000 WD CRC

ACONITUM CARMICHAELII
 DEBX.

“ACONITE; FU-TSU”

14-O-ACETYLTALATIZAMINE RT CCO
 ACONITINE RT CCO
 ALKALOIDS 5,000-10,000 RT CCO
 ARSENIC 0.77 TU CAL 1/
 ATISINE RT CCO
 CALCIUM 2,550 TU CAL
 CARMICHAELINE PL JSG
 COPPER 12 TU CAL
 FUZILINE RT CCO
 HOKBUSINE PL JSG
 HOKBUSINE-B PL JSG
 HYGENAMINE RT CCO
 HYPACONITINE RT CCO
 HYPOGNVINE RT CCO
 IGNAVINE RT CCO
 IRON 310 TU CAL
 ISOTALATIZIDINE RT CCO
 JESACONITINE RT CCO
 KARACOLINE RT CCO
 KOBUSINE RT CCO
 MAGNESIUM 490 TU CAL
 MANGANESE 18 TU CAL

MESACONITINE RT CCO
 NAPELLINE RT CCO
 NEOLINE RT CCO
 POTASSIUM 170 TU CAL
 SENBUSINE-A RT CCO
 SENBUSINE-B RT CCO
 SENBUSINE-C RT CCO
 SODIUM 204 TU CAL
 SONGORINE RT CCO
 TALITAZAMINE RT CCO
 ZINC 13 TU CAL

1/ Mineral data may apply to several species
 of Aconitum (CCO); cited alkaloids may not
 all be present in this species.

ACONITUM NAPELLUS L.

“EUROPEAN ACONITE”

“MONK'SHOOD”

ACONINE RT ALK
 ACONITIC-ACID LF HHB
 ACONITINE RT ALK
 ALKALOIDS 1,200-9,600 LF HHB
 ALKALOIDS 2,000-15,000 RT CRC
 BENZACONINE RT ALK
 CAFFEIC-ACID PL HHB
 CHLOROGENIC-ACID PL HHB
 CITRIC-ACID PL HHB
 EPHEDRINE? RT ALK
 FRUCTOSE PL CRC
 HOMOISOACONITINE LF HHB
 HYPACONITINE RT ALK
 INOSITOL LF HHB
 ISOCITRIC-ACID PL HHB
 ISONAPELLINE PL JSG
 ITACONITIC-ACID PL HHB
 LUCICULINE PL JSG
 MALIC-ACID PL HHB
 MALTOSE PL CRC
 MANNITOL PL HHB
 MELLOBIOSSE PL CRC
 MESACONITINE RT ALK
 NAPELLINE RT ALK
 NAPELLONINE SH ALK
 NEOLINE RT ALK
 NEOPELLINE RT ALK
 OXALIC-ACID PL HHB
 PICRANOTINE PL CRC
 PICROACONITINE LF HHB
 PSEUDACONITINE PL CRC
 PYRRILIDONCARBONIC-ACID PL HHB
 QUINIC-ACID PL HHB

SPARTEINE? RT ALK
 STARCH 250,000 RT HHB
 SUCCINIC-ACID PL HHB

ACORUS CALAMUS L.

“SWEETFLAG”

ACETEUGENOL RH
 ACOLAMONE PL JSG
 ACORADIN RH CCO
 ACORAGERMACRONE PL JSG
 ACORAMONE RH CCO
 ACORENOL PL JSG
 ACORENONE RH JSG
 ACORIC-ACID PL JSG
 ACORIN 2,000
 ACORINE
 ACORONE PL JSG
 ACOROXIDE RH CRC
 TRANS-ANETHOLE
 ANEURINE
 ARISTOLENE RH BML
 ARSENIC 1.13 RH CAL
 ASARALDEHYDE
 ASARONALDEHYDE TR-2,830 RH BML
 ALPHA-ASARONE 132-6,500 RH BML
 BETA-ASARONE 2,000-48,000 RH BML
 GAMMA-ASARONE
 ASARYLALDEHYDE RH
 ASCORBIC-ACID
 AZULENE RH 411/
 BORNEOL
 BUTYRIC-ACID
 CADALO-1,4,9-TRIENE 410-2,050 RH
 CCO
 DELTA-CADINENE 5-1,050 RH BML
 CALACOLENE TR-100 RH BML
 CALACONE PL JSG
 CALAMENE 384-1,920 RH BML
 CALAMENENE 10-2,535 RH BML
 CALAMENOL 1,400 RH
 CALAMENONE
 CALAMEONE 280 RH ABS
 CALAMOL 320-3,885 RH BML
 (+)-CALAMUSENONE PL JSG
 CALARENE PL JSG
 CALCIUM 7,040 RH CAL
 CAMPHENE 92-460 RH BML
 CAMPHOR RH GEO
 DELTA-CARENE RH PEP
 CARYOPHYLLINE RH BML
 CHOLINE RH HHB
 1,8-CINEOLE 0-100 RH BML HHB
 COPPER 4 RH CAL

CRYPTOACORONE
 AR-CURCUMENE
 (-)-BETA-CURCUMENE PL JSG
 P-CYMENE 0-50 RH BML
 DEXTRIN RH CRC
 DEXTROSE RH CRC
 2,6-DIEPISHYOBUNONE RH 411/
 2,5-DIMETHOXYQUINONE RH CCO
 DIMETHYLAMINE
 BETA-ELEMENE 60-750 RH BML
 ELEMICIN 10-650 RH BML
 ENANTHYLIC ACID PEP
 EO 10,000-50,000 RH GEO
 EPISHYOBUNONE 402-2,010 RH BML
 EPOXYISOACORAGERMACRONE RH
 CCO
 ETHANOL RH
 EUGENOL 84 RH CRC
 FURFURAL RH
 GALANGIN RH
 GUAIENE RH JSG
 DELTA-GUAZULENE
 BETA-GURJUNENE 20-1,700 RH BML
 N-HEPTYLIC-ACID RH CRC
 ALPHA-HUMULENE
 IRON 350 RH CAL
 ISOACOLAMONE RH CRC
 ISOACORONE RH CRC
 ISOCAESPITOL PL JSG
 ISOCALAMINEDIOL PL JSG
 ISOCALAMUSENONE PL JSG
 CIS-ISOELEMICIN TR-50 RH BML
 TRANS-ISOELEMICINE RH
 ISOEUGENOL 228-12,510 RH
 TRANS-ISOEUGENOL-METHYL-ETHER
 ISOSHYOBUNONE 134-670 RH BML
 LIMONENE 10-1,400 RH BML
 LINALOOL 30-6,000 RH BML
 MAGNESIUM 1,100 RH CAL
 MANGANESE 309 RH CAL
 MENTHOL RH PEP
 MENTHONE RH PEP
 METHYLAMINE RH HHB
 METHYL-CHAVICOL
 METHYL-EUGENOL TR-1,025 RH BML
 CCO
 METHYL-ISOEUGENOL 110-3,950 RH
 BMLCCO
 MUCILAGE 8,000
 MYRCENE
 OCIMENE
 OXALIC-ACID
 PALMITIC-ACID
 PARASARONE RH CRC

PHENOL
 ALPHA-PINENE TR-280 RH BML
 BETA-PINENE TR-150 RH BML
 POTASSIUM 16,000 RH CAL
 PREISOCALAMENDIOL RH
 RESIN
 SABINENE RH PEP
 SAPONIN PEP
 SEKISHONE TR-650 RH BML
 SELINA-3,7(11)-DIENE EO
 SELINENE PEP
 SHYOBUNONE TR-1,850 RH BML
 SITOSTEROL
 SODIUM 459 RH CAL
 TANNIN
 ALPHA-TERPINENE
 GAMMA-TERPINENE
 ALPHA-TERPINEOL TR-1,500 RH BML
 TERPINIC-ALCOHOL
 TERPINEN-4-OL 10-500 RH BML
 TERPINOLENE RH PEP
 2,4,5-TRIMETHOXYBENZALDEHYDE
 TRIMETHYLAMINE HHB
 (-)-TROPONE
 ALPHA-YLANGENE TR-500 RH BML
 ZINC RH CAL

ACTAEA PACHYPODA ELL.

“AMERICAN BANE BERRY”

PROTOANEMONIN PL CRC

ACTAEA RUBRA

“RED BANE BERRY”

PROTOANEMONIN PL JSG

RANUNCULIN PL JSG

ACTAEA SPICATA L.

“EUROPEAN BANE BERRY”

TRANS-ACONITIC-ACID FR HHB

PROTOANEMONIN FR HHB

ACTINIDIA CHINENSIS

PLANCHON

“KIWI”

ACTINIDIN FR JFM

ACTINIDINE FR CCO

AFZELICHIN PL JSG

ASCORBIC-ACID 750-6,370 FR JEL JFM
USA

ASH 4,500-41,600 FR JEL JFM USA
 CALCIUM 160-1,910 FR JEL JFM USA
 CARBOHYDRATES 148,800-877,900 FR
 JEL JFM USA

BETA-CAROTENE 0.4-6 FR JEL JFM
 JAF37:657

CAROTENOIDS 5-42 FR JAD

CHROMIUM FR JFM

P-COUMARIC-ACID PL PAS

CRYPTOXANTHIN 0.037-0.185 FR
 JAF37:657

CYANIDIN PL JLS58:142

DELPHINIDIN PL JLS58:142

FAT 700-38,400 FR JEL JFM USA

FIBER 11,000-64,900 FR JEL USA

FOLIC-ACID FR JFM

GLUCOSE FR JAD

IRON 3-30 FR JEL JFM USA

KILOCALORIES 610-3,600 FR JEL USA

LEVULOSE FR JAD

LUTEIN 1.8-9 FR JAF37:657

MAGNESIUM 300-1,770 FR JEL JFM
 USA

NEOCHROME FR JAD

NEOXANTHIN FR JAD

NIACIN 5-30 FR JEL JFM USA

PECTIN 4,200-24,800 FR JEL

PHOSPHORUS 300-3,060 FR JEL JFM
 USA

POTASSIUM 3,320-19,600 FR JEL USA

PROTEIN 7,900-62,830 FR JEL JFM USA

QUERCETIN PL JLS58:142

QUINIC-ACID FR JFM

RIBOFLAVIN 0.5-3 FR JEL JFM USA

BETA-SITOSTEROL PL PAS

SODIUM 50-295 FR JEL USA

SUCCINIC-ACID PL PAS

TANNIN 9,500 FR JFM

THIAMIN 0.2-1 FR JEL JFM USA

TOCOPHEROL FR JFM

VIOLAXANTHIN FR JAD

WATER 812,000-837,000 FR JEL JFM
 USA

ZEAXANTHIN FR JAD

ACTINIDIA POLYGAMA

(SIEB & ZUCC.) PLANCH.

“CAT POWDER”

“SILVER VINE”

ACTINIDINE TW CRC

ACTINIDIOLIDE LF CCO

ACTINIDOL LF CCO

DEHYDROIRIDODIAL-BETA-D-
GENTIOBIOSIDE PL JSG
DIHYDROACTINIDIOLIDE LF CCO
DIHYDRONEPETALACTONE LF CCO
5-HYDROXYMATATABIDIETHER LF
CCO
7-HYDROXYMATATABIDIETHER LF
CCO
IRIDIALO-BETA-D-GENTIOBIOSIDE PL
JSG
IRIDODIOLS LF CCO
IRIDOMYRMECIN LF CCO
ISODIHYDRONEPETALACTONE LF
CCO
ISOIRIDOMYRMECIN LF CCO
MATATABIDIETHER LF CCO
MATATABIETHER LF CCO
MATATABIC-ACID FR CRC
ALLO-MATATABIOL LF CCO
METABIETHER PL JSG
METATABILACETONE TW CRC
NEOMATATABIOL LF CCO
NEONEPETALACTONE LF CCO

*ADIANTUM CAPILLUS-
VENERIS L.*

“MAIDENHAIR FERN”

ADIANZONE PL CCO
ADIANOXIDE PL HHB
ASTRAGALIN LF 411/
1-CAFFEYLGALACTOSE-6-SULFATE LF
CCO
1-CAFFEYLGLUCOSE-3-SULFATE LF
CCO
1-P-COUMARYLGLUCOSE-2-SULFATE
LF CCO
1-P-COUMARYLGLUCOSE-6-SULFATE
LF CCO
3-ALPHA,4-ALPHA-EPOXYFILICANE LF
CCO
7,9-(11)-FERNADIENE LF CCO
7-FERNENE LF CCO
21-HYDROXYADIANZONE PL HHB
HYDROXYCINNAMIC-ACID LF 411/
21-BETA-HYDROXY-29NOR-22-
HOPANONE PL CCO
ISOQUERCETIN LF 411/
KAEMPFEROL-3,7-DIGLUCOSIDE PL
CCO
KAEMPFEROL-3-SULFATE LF CCO
MUCILAGE PL HHB
QUINIC-ACID PL CCO

RUTIN LF 411/
SHIKIMIC-ACID PL CCO
SUGAR PL HHB
TANNIN PL HHB

ADIANTUM PEDATUM L.

“AMERICAN MAIDENHAIR”

ADIANZONE LF CCO
ADIPEDATOL LF CCO HHB
FERNA-7,9(11)-DIENE PL JSG
FERNENE LF CCO
7-FERNENE LF CCO
FILICENAL PL HHB
FILICENE LF CCO
ISOERNENE LF CCO
NEOHOPA-11,13(18)-DIENE PL JSG
NEOHOPENE PL JSG

ADONIS VERNALIS L.

“SPRING ADONIS”

ACETYLADONITOXIN PL HHB
BETA-ACETYLADONITOXIN LF HHB
3-ACETYLSTROPHADOGENIN PL HHB
ACONITIC-ACID PL STE
ADONIDIC-ACID PL STE
ADONIDINE PL STE
ADONIDOSIDE PL HHB
ADONITIC-ACID PL HHB
ADONITOL 40,000 PL HHB
ADONITOXIGENIN PL JSG
ADONITOXIGENIN-2-ACETYL-
RHAMNOSIDE PL HHB
ADONITOXIGENIN-3-(O-ALPHA-L
{2'O-ACETYL}-RHAMNOSIDO)-BETA-
D...PL JSG
ADONITOXIGENIN-3-(O-ALPHA-L
{3'O-ACETYL}-RHAMNOSIDO)-BETA-
D...PL JSG
ADONITOXIGENIN-3-O-ALPHA-L-
RHAMNOSIDO-BETA-D-GLUCOSIDE
PL JSG
ADONITOXIN LF PL HHB
ADONITOXOL PL HHB
ADONIVERNIDASE PL HHB
ADONIVERNITH PL CCO
ADONIVERNOSIDE PL HHB
L-ASPARAGINE PL HHB
BERBERINE PL STE
CAFFEIC-ACID PL HHB
CHLOROGENIC-ACID PL HHB
CHOLINE PL HHB

CITRIC-ACID PL HHB
 CYMARIN LF HHB
 DEXTRIN PL STE
 BETA-D-DIGINOSIDE PL HHB
 3-EPI-PERIPLOGENIN PL CCO
 16-HYDROXYSTROPHANTHIDINE LF
 PL HHB
 LINOLEIC-ACID PL HHB
 LINOLEON PL JSG
 LUTEOLINXYLOSIDE PL CCO
 ORIENTIN-2"-O-BETA-D-
 XYLOPYRANOSIDE PL CCO
 PALMITIC-ACID PL HHB
 PENTATRIACONTANE PL HHB
 PENTOSANS 140,000 PL HHB
 PHYTOSTEROLS PL HHB
 PROTEIN 140,000 PL HHB
 QUERCITRIN PL STE
 L-RHAMNOSE PL HHB
 STROPHADOGENIN PL JSG
 K-STROPHANTHIDIN PL JSG
 STROPHANTHIDIN-DIGITALOSIDE PL
 JSG
 K-STROPHANTHIN LF PL HHB
 THYMININE PL HHB
 VERNADIGIN PL JSG
 VERNADIN RT HHB

AESCULUS HIPPOCASTANUM L.

"HORSE CHESTNUT"

ACETIC-ACID SD HHB
 ADENINE FL HHB
 ADENOSINE FL HHB
 AESCIN BK HHB
 AESCIN 130,000 SD HHB
 AESCULETIN BK HHB
 AESCULIN 30,000 BK HHB
 ALLANTOIN BK HHB
 ANGELIC-ACID SD CCO
 ASH 14,000-30,000 SD CRC HHB
 ASTRAGALIN FL HHB
 BARRINGTOGENOL-C SD HHB
 BARRINGTOGENOL-D SD CCO
 CARBOHYDRATES 740,000 SD CRC
 CHOLINE FL HHB
 CITRIC-ACID BK HHB
 CRYPTOAESCIGENIN SD HHB
 CRYPTOAESCIN SD HHB
 16-DESOXY-BARRINGTOGENOL SD
 HHB
 3,5-DIHYDROXY-3',4'7-
 TRIMETHOXYFLAVONE PL JSG

(-)-EPICATECHIN BK HHB
 FAT 50,000 SD CRC
 FRAXETIN BK HHB
 FRAXIN BK HHB
 GLUCURONIC-ACID SD HHB
 GUANTINE FL HHB
 ISOQUERCITRIN FL HHB
 KAEMPFEROL-3-ARABINOSIDE FL
 HHB
 KAEMPFEROL-3-GLUCOSIDE FL HHB
 KAEMPFEROL-3-RHAMNOGLUCOSIDE
 FL HHB
 LEUCOCYANIDIN BK HHB
 LEUCODELPHINIDIN BK HHB
 ALPHA-METHYL-BETA-HYDROXYBU-
 TYRIC-ACID SD
 MYRICETIN PL JSG
 PLASTOQUINONE-8 PL JSG
 PROTEIN 80,000-110,000 SD HHB
 PROTOAESCIGENIN SD HHB
 QUERCETIN BK HHB
 QUERCITRIN BK HHB
 RUTIN FL HHB
 SAPONIN 55,000-260,000 SD HHB
 SCOPOLETIN BK HHB
 SCOPOLIN BK HHB
 STARCH 300,000-600,000 SD HHB
 TANNIN FL HHB
 TIGLIC-ACID SD HHB
 3',4',7-TRIMETHYL-ETHER PL JSG
 URIC-ACID PL CRC
 WATER 30,000-400,000 SD CRC HHB

AETHUSA CYNAPIUM L.

"FOOL'S PARSLEY"

ACETYLENES PL CRC
 AETHUSINOLS PL CRC
 AETHUSIN PL CRC
 ALKALOIDS 2-3 PL CRC
 CYNOPINE PL CRC
 EO 150 PL CRC

AGASTACHE URTICIFOLIA (BENTH.) KUNTZE

"NETTLE-LEAF GIANT HYSSOP"

EO 6,500 PL BML
 GERMACRENE-D 26 PL BML
 ISOMENTHONE 962 PL BML
 LIMONENE 2,464 PL BML
 MENTHONE 546 PL BML
 MYRCENE 266 PL BML

CIS-OCIMENE 72 PL BML
 TRANS-OCIMENE 370 PL BML
 3-OCTANOL 91 PL BML
 1-OCTEN-3-OL 26 PL BML
 ALPHA-PINENE 32 PL BML
 BETA-PINENE 46 PL BML
 PULEGONE 1,138 PL BML

AGATHOSMA BETULINA
 (BERGIUS) PILL.

“BUCHU”

SEE BAROSMA

AGAVE AMERICANA L.

“CENTURY PLANT”

“MAGUEY”

AGAVASAPONINS PL CCO
 AGAVOSE PL HHB
 AGAVOSIDES PL JSG
 L-ARABINOSE RE RAA
 ASH 124,000 PL CRC
 CARBOHYDRATES 820,000 PL CRC
 CHLOROGENIN 5,000 FL RAA
 DELTA-9,11-DEHYDROHECOGENIN PL
 RAA
 FAT 13,000 PL CRC
 FIBER 156,000 PL CRC
 GALACTOSE PL RRA
 GLUCOSE PL RAA
 D-GLUCURONIC-ACID RE RAA
 HECOGENIN 4,000-30,000 PL HHB
 KAEMPFEROL-3-GLUCOSIDE PL RAA
 KAEMPFEROL-3-RUTINOOSIDE PL
 RAA
 OXALIC-ACID PL HHB
 PISCIDIC-ACID PL JSG
 PROTEIN 61,000 PL CRC
 RHAMNOSE PL RAA
 ROCOGENIN PL RAA
 SAPONIN PL HHB
 SMILAGENIN PL RAA
 TIGOGENIN PL RAA
 XYLOSE PL RAA

AGAVE SISALANA PERRINE

“MESCAL”

BARBOURGENIN PL JSG
 DIOSGENIN PL CRC

GENTROGENIN PL CRC
 GITOGENIN PL HHB
 HAINANGENIN PL JSG
 HECOGENIN PL HHB
 DELTA-9,11-HECOGENIN PL CRC
 NEOTIGOGENIN PL HHB
 PECTIN PL HHB
 SARSAPOGENIN PL HHB
 SISALAGENIN PL HHB
 TIGOGENIN PL HHB
 YAMOGENIN PL CRC

AGRIMONIA EUPATORIA L.

“AGRIMONY”

AGRIMONOLIDE PL CRC
 ALPHA-AMYRIN PL HHB
 APIGENIN-GLUCOSIDE PL 411/
 CATECHIN 26,000 PL WBB
 CATECHIN-TANNIN LF WBB
 CERYL-ALCOHOL PL HHB
 COUMARINS PL 411/
 ELLAGIN-TANNIN LF WBB
 FAT 350,000 SD WBB
 GALLO-TANNIN RT WBB
 LUTEOLIN-GLUCOSIDE PL 411/
 PALMITIC-ACID PL HHB
 QUERCETIN-GLUCOSIDE PL 411/
 QUERCITRIN LF HHB
 SILICIC-ACID 120,000 EX HHB WBB
 STEARIC-ACID PL HHB
 TANNIN 50,000-80,000 LF HHB 411/
 THIAMIN 2.4 LF WBB
 TRITERPENES 15,000 PL HHB
 URSOLIC-ACID 6,000 PL HHB

AGROSTEMMA GITHAGO L.

“CORN COCKLE”

AGROSTEMMIC-ACID PL CRC
 ALLANTOIC-ACID SP CRC
 ALLANTOIN SP CRC
 CITRULLIN SD CRC
 2,4-DIHYDROXY-6-METHYL-PHENY-
 LALANINE SD CRC
 FAT 64,000-68,000 SD CRC
 GITHAGENIN PL JSG
 GITHAGIN PL CRC
 GITHAGOSIDE PL JSG
 PROTEIN 144,000-162,000 SD CRC
 SAPOTOXIN PL CRC

AILANTHUS ALTISSIMA (MILL.)
SWINGLE

“TREE OF HEAVEN; STINKTREE”

ACETYLAMAROLIDE BK 411/
1-ACETYL-4-METHOXY-BETA-
CARBOLINE RT BK CCO
AILANTHIN 49,600 PL HHB
AILANTHINONE BK 411/
AILANTHONE FR CCO
AMAROLIDE BK 411/
CALCIUM-OXALATE PL PEP
CANTHIN-6-ONE WD CCO
CANTHIN-6-ONE-3-OXIDE WD CCO
CARBOLINE-1-CARBOXYLATE BK 411/
CELLULOSE BK HHB
CERYL-ALCOHOL PL PEP
CERYL-PALMITATE BK HHB
1-(1',2'-DIHYDROXYETHYL)-4-
METHOXY-BETA-CARBOLINE RT BK
CCO
2,6-DIMETHOXY-P-BENZOQUINONE
BK 411/
2,6-DIMETHOXYQUINONE PL PEP
ELAIDIC-ACID PL PEP
FAT 555,000-591,000 SD CRC
Fisetin PL PEP
GALLIC-ACID PL PEP
HEMICELLULOSE PL PEP
HOLOCELLULOSE PL PEP
1-HYDROXYCANTHIN-6-ONE TC ABD
1-(2'-HYDROXYETHYL)-4-METHOXY-
BETA-CARBOLINE RT BK CCO
ISOQUERCETIN LF HHB
ISOQUERCITRIN LF CCO
LIGNIN PL PEP
LINUTHIN LF HHB
1-METHOXYCANTHIN-6-ONE WD CCO
1-METHOXYCANTHIN-6-ONE-3N-OXIDE
RT BK CCO
METHYL-4-METHOXY-BETA-
CARBOLINE-1-CARBOXYLATE RT BK
CCO
MUCILAGE PL PEP
NEOQUASSIN PL HHB
OLEORESIN PL PEP
PHLOBAPHENE BK HHB
POLYSACCHARIDE BK HHB
PROTEIN 275,000-276,000 SD CRC
QUASSIN 49,600 BK HHB
(C36H50O10)
QUASSIN PL HHB

QUERCETIN LF HHB
RHAMNOSE PL PEP
SAPONIN BK HHB
SCOPOLETIN PL JSG
SHINJULACTONE-C 10 RT BK CCO
BETA-SITOSTEROL PL JSG
TANNIN 120,000 LF HHB

AJUGA REPTANS L.

“BUGLE”

AJUGALACTONE PL JSG
AJUGAREPTANSONE PL JSG
AJUGASTERONE PL JSG
AJUGOL PL JSG
AJUGOSIDE PL JSG
ASPERULIN PL HHB
AUCUBIN PL YYB
CYANIDIN PL CRC
DELPHINIDIN PL CRC
BETA-ECDYSONE PL JSG
HARPAGIDE PL JSG
HARPAGIDE-ACETATE PL JSG
24-NORCYASTERONE PL JSG
29-NORSENGOSTERONE PL JSG
POLYPODINE-B PL JSG
REPTIOSIDE PL JSG
TANNIN 150,000 PL CRC

AKEBIA QUINATA (THUNB.)
DECNE

“CHOCOLATE VINE”

ACETIC-ACID SD CCO
3-O-ACETYLOLEANOLIC-ACID PL JSG
AKEBIN ST CCO
AKEBOSIDES ST CCO
ARABINOSE ST CCO
CALCIUM 19,000 ST SMO
COPPER 7 ST SMO
FAT 180,000-383,000 SD CCO CRC
GLUCOSE ST CCO
HEDERAGENIN ST CCO
IRON 150 ST SMO
LINOLEIC-ACID SD CCO
MAGNESIUM 840 ST SMO
MANGANESE 310 ST SMO
NORARJUNOLIC-ACID PL JSG
OLEANOLIC-ACID ST CCO
OLEIC-ACID SD CCO
PALMITIC-ACID SD CCO
POTASSIUM 2,410 ST SMO

PROTEIN 156,000 SD CRC
 RHAMNOSE ST CCO
 SAPONIN PL HHB
 SODIUM 18 ST SMO
 STEARIC-ACID SD CCO
 ZINC 10 ST SMO

ALBIZZIA JULIBRISSIN DURAZZ.

"MIMOSA"

ACACIC-ACID PL JSG
 ALBISIDE PL JSG
 ALBIZZIIN SD CCO
 ARSENIC 0.15 BK CAL
 CALCIUM 35,500 BK CAL
 S-(BETA-CARBOXY-ETHYL)-L-
 CYSTEINE SD CCO
 COPPER 5-6 BK CAL
 FAT 85,000-111,000 SD CRC
 IRON 100 BK CAL
 MAGNESIUM 1,090 BK CAL
 MANGANESE 33 BK CAL
 MERCURY 0.07 BK CAL
 POTASSIUM 1,990 BK CAL
 PROTEIN 321,000-330,000 SD CRC
 SAPONIN BK CCO
 SODIUM 211 BK CAL
 ALPHA-SPINASTERYL-BETA-D-
 GLUCOSIDE BK CCO
 TANNIN BK CCO
 3',4',7'-TRIHYDROXYFLAVONE BK CCO
 ZINC 7-8 BK CAL

ALCHORNEA FLORIBUNDA MUELL.-ARG.

"NLANDO"

ALCHORNEINE PL JSG
 ALCHORNEINONE PL JSG
 ALKALOIDS 12,000 RT HHB
 ANTHRANILIC-ACID PL HHB
 GENTISINIC-ACID PL HHB
 ISOALCHORNEINE PL CRC
 YOHIMBINE? PL HHB

ALETRIS FARINOSA L.

"COLIC ROOT"

"STAR GRASS"

"UNICORN ROOT"

ALKALOIDS RT HHB
 DIOSGENIN RT HHB
 SAPONIN RT HHB

ALEURITES FORDII HEMSL.

"TUNGOIL TREE"

13-ACETYL-16-HYDROXYPHORBOL PL
 JSG
 CAMPESTEROL PL JSG
 CAMPESTEROL-6'-LINOLYLGLUCOSIDE
 SD CCO
 CAMPESTEROL-6'-
 PALMITYLGLUCOSIDE SD CCO
 CAMPESTEROL-6'-STEARYLGLUCOSIDE
 SD CCO
 L-3-CARBOXYL-1,2,3,4-TETRAHYDRO-
 BETA-CARBOLINE SD CCO
 3,3'-DI-O-METHYL-ELLAGIC-ACID PE
 CCO
 ALPHA-ELAEOSTEARIC-ACID 225,000-
 450,000 SD HHB
 ELLAGIC-ACID PE CCO
 FAT 140,000-200,000 FR HHB
 FAT 300,000-600,000 SD HHB
 16-HYDROXYPHORBOL PL JSG
 METHYL-GALLATE PE CCO
 OLEIC-ACID 45,000-90,000 SD HHB
 PALMITIC-ACID 12,000-24,000 SD
 HHB
 12-O-PALMITOYL-13-O-ACETYL-16-
 HYDROXYPHORBOL FR CCO
 12-O-PALMITOYL-4-DEOXY-16-
 HYDROXYLUMIPHORBOL-13-
 ACETATE PL JSG
 12-O-PALMITOYL-4-DEOXY-16-
 HYDROXYPHORBOL-13-ACETATE PL
 JSG
 12-O-PALMITOYL-4,16-
 DIHYDROXYPHORBOL-13-ACETATE
 PL JSG
 12-O-PALMITOYL-16-
 HYDROXYPHORBOL-13-ACETATE PL
 JSG
 PHYTOSTEROLS SD HHB
 SAPONIN SD HHB
 BETA-SITOSTEROL PL JSG
 SITOSTEROL-6'-LINOLYLGLUCOSIDE
 SD CCO
 SITOSTEROL-6'-STEARYLGLUCOSIDE
 SD CCO
 STEARIC-ACID 3,900-7,800 SD HHB
 STIGMASTEROL PL JSG
 STIGMASTEROL-6'-
 LINOLYLGLUCOSIDE SD CCO
 STIGMASTEROL-6'-
 PALMITYLGLUCOSIDE SD CCO

STIGMASTEROL-6'-
STEARYLGLUCOSIDE SD CCO
3,3',4-TRI-O-METHYL-ELLAGIC-ACID
PE CCO

ALEURITES MOLUCCANA (L.)
WILLD.

"CANDLENUT"

ASCORBIC-ACID 0 SD CRC
ASH 30,000-36,000 SD CRC
CALCIUM 800-860 SD CRC
CARBOHYDRATES 80,000-86,000 SD
CRC
BETA-CAROTENE 0 SD CRC
FAT 630,000-677,000 SD CRC
IRON 20-22 SD CRC
KILOCALORIES 6,260-6,730 SD CRC
LINOLEIC-ACID 201,600-216,640 SD CRC
LINOLENIC-ACID 37,800-40,620 SD CRC
OLEIC-ACID 340,200-365,580 SD CRC
PHOSPHORUS 2,000-2,150 SD CRC
PROTEIN 190,000-231,000 SD CRC
TANNIN 40,000-60,000 BK CRC
THIAMIN 0.6 SD CRC
WATER 70,000 SD CRC

*ALISMA PLANTAGO-
AQUATICA* L.

"WATER PLANTAIN; MUD
PLANTAIN; TSE-HSIEH; ZE-XIE"

ACETYLALISOLS PL JSG
ACETYLVALINE RH CCO
ADENOSINE-5'-PHOSPHOSULFATE-
SULFOTRANSFERASE PL PEP
ALISMOL PL PEP
ALISMOXIDE PL PEP
ALISOL-A RH CCO
ALISOL-A-MONOACETATE PL PEP
ALISOL-B RH CCO
ALISOL-B-MONOACETATE PL PEP
ALISOL-C RH CCO
ALISOL-C-MONOACETATE PL PEP
ARABINOSE PL PEP
ARSENIC 0.05 RH CAL
ASPARAGINE PL PEP
CALCIUM 1,630-3,430 RH CAL SMO
CHOLINE RH CCO
CHRYSOERIOL PL PEP
COPPER 11-15 RH CAL SMO
CYTIDINE PL PEP
EPIALISOL-A RH CCO

FAT 42,000 RH CCO
D-FRUCTOSE RH CCO
FURFURALDEHYDE PL PEP
GALACTOSE PL PEP
D-GLUCOSE RH CCO
GUANIDINE PL PEP
16-BETA-HYDROXYALISOL-B-
MONOACETATE RH ABS
IRON 95-110 RH CAL SMO
LECITHIN RH CCO
LIGNIN PL PEP
LUTEOLIN PL PEP
MAGNESIUM 1,410-1,740 RH CAL SMO
MANGANESE 360-479 RH CAL SMO
MERCURY 0.01 RH CAL
16-BETA-METHOXYALISOL-B-
MONOACETATE RH ABS
NICOTINIC-ACID PL PEP
OLEIC-ACID PL PEP
PALMITIC-ACID PL PEP
PANTOTHENIC-ACID PL PEP
PHENOL PL PEP
POTASSIUM 9,560-11,200 RH CAL SMO
PROANTHOCYANIDIN PL PEP
PROTEIN 132,000 SD CRC
PYRIDOXINE PL PEP
RAFFINOSE PL PEP
RUTIN LF CCO
BETA-SITOSTEROL RH CCO
SITOSTEROL-3-O-6-STEAROYL-BETA-D-
GLUCOPYRANOSIDE PL ABS
SODIUM 151-322 RH CAL SMO
STACHYOSE PL PEP
STEARIC-ACID PL PEP
SUCROSE RH CCO
TANNIN PL PEP
VALINE RH CCO
ZINC 54-68 RH CAL SMO

ALLIARIA PETIOLATA (BIEB.)
CAVARA & GRANDE

"GARLIC MUSTARD"

ALLIAROSIDE LF HHB
ALLYL-GLUCOSINOLATE PL PEP
ALLYL-ISOTHIOCYANATE 40-460 PL
JAD
ALLYL-SULFIDE PL JAD
ARACHIDIC-ACID 880 SD WOI
ASCORBIC-ACID PL PEP
BENZYL-GLUCOSINOLATE PL PEP
BENZYL-ISOTHIOCYANATE 2-25 EO
JAD

- BUT-3-ENYL-ISOTHIOCYANATE PL
NAP
2-BUTYL-GLUCOSINOLATE PL PEP
CARDEONLIDES SD HHB
CAROTENE PL PEP
1-CYANO-2,3-EPITHIOPROPANE PL
NAP
DIALLYL-SULFIDE 500-960 SD HHB
EICOSADIENIC-ACID 1,760 SD WOI
EICOSENOIC-ACID 8,800 SD WOI
EO 50-520 PL WOI
EO 330-930 RT WOI
EO 5,000-9,600 SD HHB
ERUCIC-ACID 103,400-170,940 SD WOI
FAT 220,000 SD WOI
FERULOYL-CHOLINE SD NAP
FERULOYL-ISOCHOLINE SD NAP
GLYCEROL PL PEP
GLYCOLIC-ACID-OXIDASE PL PEP
ISOTHIOCYANATES 45-468 EO JAD
LINOLEIC-ACID 48,400 SD WOI
ALPHA-LINOLEIC-ACID PL PEP
LINOLENIC-ACID 8,800 SD WOI
ALPHA-LINOLENIC-ACID PL PEP
BETA-LINOLENIC-ACID PL PEP
MYROSIN PL JAD
OLEIC-ACID 15,400 PL WOI
PALMITIC-ACID 8,800 PL WOI
PROP-2-ENYL-ISOTHIOCYANATE PL
NAP
PROTEIN 280,000 SD WOI
SAPONARIN PL WOI
SINAPIC-ACID SD NAP
SINAPIC-ACID-O-BETA-D-
GLUCOPYRANOSIDE SD NAP
SINAPINE SD NAP
SINAPINE-O-BETA-D-
GLUCOPYRANOSIDE SD NAP
SINIGRIN PL PEP
SQUALENE PL PEP
STEARIC-ACID 880 SD WOI
TETRACOSADIENOIC-ACID 17,600 SD
WOI
- ALLYL DISULFIDE LF JAD
ALLYL-MONOSULFIDE PL PEP
ALLYL-SULFIDE PL PEP
ALUMINUM-PHOSPHATE PL PEP
ARGINASE PL PEP
ARGININE PL PEP
ASCORBIC-ACID 400-2,367 FL CRC
ASCORBIC-ACID 170-3,019 LF CRC HHB
ASCORBIC-ACID 170-1,241 RT CRC
ASCORBIC-ACID-OXIDASE PL PEP
ASH 4,000-24,000 FL CRC
ASH 8,000-75,000 LF CRC
ASH 9,000-66,000 RT CRC
ASPARAGINE PL PEP
ASPARTIC-ACID PL PEP
BUTYL-SULFIDE PL PEP
CAFFEIC-ACID PL PEP
1-O-CAFFEYOYL-BETA-D-GLUCOSE PL
PEP
CALCIUM 230-1,361 FL CRC
CALCIUM 520-5,472 LF CRC
CALCIUM 520-3,796 RT CRC
CARBOHYDRATES 105,000-621,000 FL
CRC
CARBOHYDRATES 70,000-767,000 LF
CRC
CARBOHYDRATES 103,000-752,000 RT
CRC
BETA-CAROTENE 25-151 FL CRC
BETA-CAROTENE 0.2-230 LF CRC
BETA-CAROTENE 0.2-1.8 RT CRC
CATALASE PL PEP
CELLULOSE PL PEP
CHLOROGENIC-ACID PL PEP
P-COUMARIC-ACID PL PEP
CYCLOALLIN PL PEP
CYTIDYLIC-ACID PL PEP
DEHYDROASCORBIC-ACID PL PEP
DEOXYRIBONUCLEIC-ACID PL PEP
3,5-DIALKYLTRITHIOLANES PL PEP
DIALLYL-SULFIDE PL PEP
DIKETOGLUCONIC-ACID PL PEP
3,4-DIMETHYL-2,5-DIOXO-2-,5-
DIHYDROTHIOPHENE PL PEP
DIMETHYL-DISULFIDE PL PEP
DI-PROPYL-THIOSULFINATES PL PEP
ESCULETIN PL PEP
ESTERASE PL PEP
ETHYLENE-BIS-DITHIO-CARBAMATE
PL PEP
ETHYL-SULFIDE PL PEP
FAT 5,000-30,000 FL CRC
FAT 3,000-47,000 LF CRC
FAT 3,000-22,000 RT CRC

ALLIUM AMPELOPRASUM L.

“ELEPHANT GARLIC; KURRAT”

- ACETYL-SYNTHETASE PL PEP
ADENYLIC-ACID PL PEP
ALANINE PL PEP
ALCOHOL-DEHYDROGENASE PL PEP
ALLIIN PL PEP
ALLITHIAMINE PL PEP

FERRIC-PHOSPHATE PL PEP
 FERULIC-ACID PL PEP
 FIBER 11,000-65,000 FL CRC
 FIBER 10,000-94,000 LF CRC
 FOLACIN PL PEP
 FOLIC-ACID PL PEP
 FRUCTOSE PL PEP
 FRUCTOSYLSUCROSE PL PEP
 GALACTOSE PL PEP
 GLUCOFRUCTAN PL PEP
 GLUCOSE PL PEP
 GLUTAMATE-DEHYDROGENASE PL PEP
 GLUTAMIC-ACID PL PEP
 GLUTAMINE PL PEP
 GUANYLIC-ACID PL PEP
 HEMICELLULOSE PL PEP
 HISTIDINE PL PEP
 HISTONES PL PEP
 4-HYDROXY-PROLINE PL PEP
 IRON 9-53 FL CRC
 IRON 11-255 LF CRC
 IRON 11-80 RT CRC
 ISOCHLOROGENIC-ACID PL PEP
 ISOLEUCINE PL PEP
 KAEMPFEROL-3-BETA-D-GLUCOSIDE PL PEP
 KAEMPFEROL-HETEROSIDE PL PEP
 KAEMPFEROL-3-XYLOSYL-BETA-D-GLUCOSIDE PL PEP
 KILOCALORIES 550-3,250 FL CRC
 KILOCALORIES 350-3,560 LF CRC
 KILOCALORIES 450-3,280 RT CRC
 LACTATE-DEHYDROGENASE PL PEP
 LEUCINE PL PEP
 LIGNIN PL PEP
 LIGNOCERIC-ACID PL PEP
 LINOLEIC-ACID PL PEP
 LINOLENIC-ACID PL PEP
 LYSINE PL PEP
 MALTOSYL PL PEP
 MANNITOL PL PEP
 METHIONINE PL PEP
 METHYL-ALLIIN PL PEP
 METHYL-SULFIDE PL PEP
 MYOINOSITOL PL PEP
 NIACIN 9-53 FL CRC
 NIACIN 5-57 LF CRC
 NICOTINIC-ACID PL PEP
 ODORIN PL PEP
 OXALATE-DEHYDROGENASE PL PEP
 OXALIC-ACID PL PEP
 PALMITIC-ACID PL PEP
 PECTINS PL PEP

PEROXIDASE PL PEP
 PHENANTHRENE PL PEP
 PHENOL-OXIDASE PL PEP
 PHENYLALANINE PL PEP
 S-2,2-PROPENYL-AMINO-ACID-SULFOXIDE PL PEP
 PHOSPHORUS 380-2,249 FL CRC
 PHOSPHORUS 480-4,528 LF CRC
 PHOSPHORUS 500-3,650 RT CRC
 POLYPHENOLS PL PEP
 POTASSIUM 3,160-29,811 LF CRC
 PROLINE PL PEP
 PROPANE-THIOSULFINATE PL PEP
 PROPYLOALLIIN PL PEP
 PROPYL-DISULFIDE PL PEP
 PROTEIN 55,000-325,000 FL CRC
 PROTEIN 22,000-217,000 LF CRC
 PROTEIN 22,000-161,000 RT CRC
 QUERCETIN-3-GLUCOSIDE PL PEP
 RAFFINOSE PL PEP
 RIBOFLAVIN 1.9-11.2 FL CRC
 RIBOFLAVIN 0.6-9.4 LF CRC
 RIBONUCLEIC-ACID PL PEP
 SAPONINS PL PEP
 SCOPOLETIN PL PEP
 SERINE PL PEP
 SIDERAMINES PL PEP
 SILICON-DIOXIDE PL PEP
 SINAPIC-ACID PL PEP
 BETA-SITOSTEROL PL PEP
 SODIUM 50-472 LF CRC
 STACHYOSE PL PEP
 STEARIC-ACID PL PEP
 SUCCINIC-DEHYDROGENASE PL PEP
 SUCROSE PL PEP
 SULFUR 600-700 LF JAD
 SULFUR-TRIOXIDE PL PEP
 THIAMIN 1.4-8.3 FL CRC
 THIAMIN 0.9-8.5 LF CRC
 THIAMIN 1.1-8 RT CRC
 THIAMIN-PYROPHOSPHATE PL PEP
 THREONINE PL PEP
 ALPHA-TOCOPHEROL PL PEP
 TRYPTOPHAN PL PEP
 TYROSINE PL PEP
 UMBELLIFERONE PL PEP
 URIDYLIC-ACID PL PEP
 VALINE PL PEP
 VIT-U PL PEP
 WATER 831,000 FL CRC
 WATER 854,000-894,000 LF CRC
 WATER 863,000 RT CRC
 ZINC PL PEP

ALLIUM CEPA L.**"ONION"**

- ABSCISSIC-ACID BU NAP
 ACETAL BU NAP
 ACETIC-ACID BU NAP
 ALANINE 330-8597 BU USA
 ALLICIN BU 411/
 ALLIIN BU 411/
 ALLIOFUROSIDE-A 220 PC NAP
 ALLIOSPIROSIDE-A 4,600 PC NAP
 ALLIOSPIROSIDE-B 500 FR NAP
 ALLIOSPIROSIDE-C 491 FR NAP
 ALLIOSPIROSIDE-D 71 FR NAP
 S-ALLYL-CYSTEINE BU NAP
 ALLYLPROPYL-DISULFIDE BU AYL
 ALUMINUM 0.3-385 BU AAS USG
 ALPHA-AMYRIN BU NAP
 ARABINOSE BU NAP
 ARACHIDIC-ACID SD NAP
 ARGinine 1,580-17,222 BU USA
 ARSENIC 0.0019-0.076 BU AAS USG
 ASCORBIC-ACID 60-2,703 BU CRC PED
 USA
 ASCORBIC-ACID 390-5,000 LF CRC
 ASH 4,000-63,000 BU CRC PED USG
 ASH 7,000-90,000 LF CRC
 ASPARAGINE BU NAP
 ASPARTIC-ACID 640-6,967 BU USA
 BARIUM 4-28 BU USG
 BENZYL-ISOTHIOCYANATE BU NAP
 BORON 1-45 BU AAS BOB USG
 BRASSICASTEROL SD NAP
 BROMINE <1-15 BU AAS
 CADMIUM 0.005-0.38 BU AAS USG
 CAFFEIC-ACID BU NAP
 1-O-CAFFEYL-BETA-D-GLUCOSE LF
 NAP
 CALCIUM 200-3,008 (-6,480) BU AAS
 CRC USA USG
 CALCIUM 420-5,385 LF CRC
 CALCIUM-OXALATE BU NAP
 CAMPESTEROL BU NAP
 CARBOHYDRATES 73,200-798,000 BU
 CRC USA
 CARBOHYDRATES 47,000-603,000 LF
 CRC
 S-(BETA-CARBOXYBETA-METHYL-
 ETHER)-CYSTEINE BU NAP
 S-(2-CARBOXY-PROPYL)-GLUTA-
 THIONE 125 BU NAP
 BETA-CAROTENE 0-52 BU CRC PED
 USA
 BETA-CAROTENE 28 FL NAP
 BETA-CAROTENE 12-158 LF CRC
 CATECHOL BU NAP
 CEPAENES BU NAP
 CEPOSIDE-D SD NAP
 CHOLEST-7-EN-3-BETA-OL BU NAP
 CHOLESTEROL BU
 CHOLINE 830 BU NAP
 CHROMIUM 0.057-4.0 BU USG ABS 5/
 CHROMIUM 4.8 SD ABS 5/
 CITRIC-ACID BU NAP
 COBALT 0.001-0.2 BU AAS USG ABS 5/
 COBALT 2.5 SD ABS 5/
 COPPER 18.2 SD ABS 5/
 COPPER 0.3-11 BU AAS USA USG
 P-COUMARIC-ACID BU NAP
 1-O-P-COUMAROYL-BETA-D-GLUCOSE
 LF NAP
 CYANIDIN-BIOSIDE BU NAP
 CYANIDIN-DIGLYCOSIDE BU NAP
 CYANIDIN-3-O-BETA-D-DIGLYCOSIDE
 BU NAP
 CYANIDIN-3-O-LAMINARIBIOSIDE BU
 NAP
 CYANIDIN-MONOGLYCOSIDE BU NAP
 CYCLOALLIN BU AYL
 CYCLOARTENOL BU NAP
 CYCLOEUCALENOL BU NAP
 CYSTEINE BU NAP
 CYSTINE 210-2289 BU USA
 5-DEHYDRO-AVENASTEROL SD NAP
 DIALLYL-DISULFIDE EO NAP
 DIALLYL-SULFIDE EO NAP
 DIALLYL-TRISULFIDE EO NAP
 DIHYDROALLIN BU AYL
 2,3-DIMETHYL-(DL)-BUTANE-CIS-1-CIS-
 DITHIAL-S,S'-DIOXIDE BU NAP
 3,4-DIMETHYL-2,5-DIOXO-2,5-
 DIHYDROTHIOPHENE BU NAP
 2,3-DIMETHYL-5,6-DITHIA-
 BICYCLO(2,2,1)HEXANE-5-OXIDE BU
 NAP
 CIS-2,3-DIMETHYL-5,6-DITHIA-
 CYCLO(2,2,1)HEPTANE-5-OXIDE BU
 NAP
 TRANS-2,3-DIMETHYL-5,6-DITHIA-
 CYCLO(2,2,1)HEPTANE-5-OXIDE BU
 NAP
 DIMETHYL-DISULFIDE BU 411/
 DIMETHYL-SULFIDE EO NAP
 2,3-DIMETHYLTHIOPHENE BU NAP
 2,4-DIMETHYLTHIOPHENE BU NAP
 2,5-DIMETHYLTHIOPHENE BU NAP
 3,4-DIMETHYLTHIOPHENE BU NAP

3,4-DIMETHYLTHIOPHENE BU AYL
 DIMETHYL-TRISULFIDE EO NAP
 DIPHENYLAMINE 14-11,000 BU NAP
 DIPROPYL-DISULPHIDE BU
 DIPROPYL-TRISULFIDE BU NAP
 EICOSEN-1-OL SD NAP
 EO 50-150 BU HHB
 ETHANOL BU NAP
 FAT 1,000-36,079 BU CRC USA
 FAT 6,000-77,000 LF CRC
 FERULIC-ACID <0.5 BU CRC(FSN)
 1-O-FERULOYL-BETA-D-GLUCOSE LF
 NAP
 FIBER 4,400-126,000 BU CRC USA
 FIBER 11,000-141,000 LF CRC
 FLUORINE 0.04-0.8 BU AAS
 FRUCTOSAN BU
 FRUCTOSE 65,600-162,600 BU NAP
 1(F)-BETA-FRUCTOSYL-SUCROSE BU
 NAP
 6(G)-BETA-FRUCTOSYL-SUCROSE BU
 NAP
 FUMARIC-ACID BU NAP
 GIBBERELLIN-A-4 RT NAP
 GLUCOFRUCTAN BU NAP
 GLUCOSE 102,000-158,600 BU NAP
 GLUTAMINE BU NAP
 GAMMA-L-GLUTAMYL-ARGININE BU
 NAP
 GAMMA-L-GLUTAMYL-CYSTEINE BU
 NAP
 GAMMA-L-GLUTAMYL-S-(2-CARBOXY-
 BETA-METHYL-ETHYL)-CYSTEINYL-
 GLYCINE BU NAP
 GAMMA-L-GLUTAMYL-S-(2-CARBOXY-
 BETA-METHYL-ETHYL)-CYSTEINYL-
 GLYCINE-ETHYL-ESTER BU NAP
 GAMMA-L-GLUTAMYL-S-(2-CARBOXY-
 N-PROPYL)-L-CYSTEINE BU
 GAMMA-L-GLUTAMYL-ISOLEUCINE
 BU NAP
 GAMMA-GLUTAMYL-LEUCINE BU
 NAP
 GAMMA-GLUTAMYL-s-METHYL-
 CYSTEINE PL JSG
 GAMMA-L-GLUTAMYL-S-(1-
 PROPENYL)-L-CYSTEINE-SULFOXIDE
 BU NAP
 GAMMA-GLUTAMYL-PHENYLALANINE
 BU NAP
 GAMMA-GLUTAMYL-PHENYLALA-
 NINE-ETHYL-ESTER BU NAP
 GAMMA-L-GLUTAMYL-VALINE BU
 NAP
 GLUTAN BU
 GLYCINE 490-5,341 BU USA
 GLYCOLIC-ACID BU NAP
 GRAMISTEROL BU NAP
 HEXADECEN-1-OL SD NAP
 5-HEXYL-CYCLOPENTA-1,3-DIONE BU
 PC30:799
 HISTIDINE 190-2,071 BU USA
 P-HYDROXYBANZOIC-ACID 107 BU
 CRC(FSN)
 IRON 2-135 BU CRC USA USG
 IRON 34-436 LF CRC
 IRON 235 SD ABS 5/
 28-ISOFUCOSTEROL BU NAP
 ISOLEUCINE 420-4,578 BU USA
 KAEMPFEROL BU 411/
 KAEMPFEROL-3,4'-DI-O-BETA-D-
 GLUCOSIDE BU NAP
 KAEMPFEROL-4',7-DI-O-BETA-D-
 GLUCOSIDE BU NAP
 KAEMPFEROL-4'-O-BETA-D-GLUCOSIDE
 BU NAP
 KILOCALORIES 380-3,750 BU CRC
 KILOCALORIES 260-3,330 LF CRC
 LEAD 0.01-1.4 BU AAS USG
 LEUCINE 410-4,469 BU USA
 LINOLEIC-ACID 59% sd oi NAP
 LITHIUM 0.152-0.324 BU USG
 LOPHENOL BU NAP
 LYSINE 560-6,104 BU USA
 MAGNESIUM 76-1,230 (-2,750) BU AAS
 USA USG
 MALIC-ACID BU NAP
 MALIC-ACID LF NAP
 MANGANESE 19.4 SD ABS 5/
 MANGANESE 1-38 BU USA USG
 D-MANNITOL BU NAP
 MERCURY 0.00038-0.00054 BU USG
 METHANOL BU NAP
 METHIONINE 100-1,090 BU USA
 METHIONINE-SULFONE BU NAP
 METHIONINE-METHYLSULFONIUM
 SALT BU NAP
 METHYL-ALLIIN BU 411/
 2-METHYL-BUT-2-EN-1-AL BU NAP
 2-METHYL-BUTYR-2-ALDEHYDE BU
 NAP
 S-METHYLCYSTEINE BU 411/
 S-METHYLCYSTEINE-SULFOXIDE BU
 METHYL-DITHIO-METHANE EO NAP
 1-METHYLDITHIO-PROPANE EO NAP
 24-METHYLENE-CYCLOARTENOL BU
 NAP
 2-METHYL-PENT-2-EN-1-AL EO NAP

- METHYL-CIS-PROPENYL-DISULFIDE
 METHYL-PROPENYL-TRISULFIDE PL
 JSG
 METHYLPROPYL-DISULFIDE BU 411/
 METHYLPROPYL-TRISULFIDE BU
 NAP
 1-(METHYLSULFINYL)-PROPYL-
 METHYL-DISULFIDE BU NAP
 1-METHYLTRITHIO-PROPANE EO
 NAP
 4-ALPHA-METHYL-ZYMOSTENOL BU
 NAP
 MEVALONIC-ACID 0.5 BU NAP
 MOLYBDENUM <0.1-2.3 BU AAS USG
 MUFA 230-2,230 BU USA
 MYRISTIC-ACID 10-100 BU USA
 MYROSINASE BU
 NIACIN 1-75 BU CRC USA
 NIACIN 7-90 LF CRC
 NICKEL 0.05-2.5 BU USG ABS 5/
 NICKEL 0.03-4 SD AAS ABS 5/
 NITROGEN 1,700-17,690 BU AAS
 NONADECANOIC-ACID BU NAP
 31-NORLANOSTENOL BU NAP
 31-NORCYCLOARTENOL BU NAP
 5-OCTYL-CYCLOPENTA-1,3-DIONE BU
 PC30:799
 OLEANOLIC-ACID BU NAP
 OLEIC-ACID 230-2,230 BU USA
 OLEIC-ACID 20.3% SD OI NAP
 OXALIC-ACID 10 BU WBB
 PAEONIDIN-GLYCOSIDE BU 411/
 PALMITIC-ACID 240-2,325 BU USA
 PANTOTHENIC-ACID 1-16 BU USA
 PECTIN BU
 PELARGONIDIN-MONOGLYCOSIDE BU
 NAP
 PENTOSAN BU
 PEROXIDASE BU
 PHENYLALANINE 300-3,270 BU USA
 PHLOROGLUCINOL 100 BU NAP
 PHLOROGLUCINOL-CARBOXYLIC-ACID
 100 BU NAP
 PHOSPHORUS 275-4,038 BU CRC USA
 PHOSPHORUS 310-5,513 LF AAS CRC
 PHYTOHORMONE BU GONADOTROPIC
 PHYTOSTEROLS 150-1,455 BU USA
 POTASSIUM 1,514-22,164 BU CRC USA
 PROLINE 370-4,033 BU USA
 PROPANE-1-THIOL BU NAP
 CIS-PROPANETHIOL-S-OXIDE BU NAP
 PROPAN-1-OL BU NAP
 CIS-1-(PROPENYL-DITHIO)-PROPANE
 EO NAP
 TRANS-1-(PROPENYL-DITHIO)-
 PROPANE EO NAP
 S-PROP-1-ENYL-CYSTEINE-S-OXIDE 26
 BU NAP
 PROP-CIS-ENYL-PROPYL-DISULFIDE
 BU NAP
 PROP-TRANS-ENYL-PROPYL-DISUL-
 FIDE BU NAP
 PROP-CIS-ENYL-PROPYL-TRISULFIDE
 BU NAP
 PROP-TRANS-ENYL-PROPYL-TRISUL-
 FIDE BU NAP
 TRANS-S-(1-PROPENYL)CYSTEINE-
 SULFOXIDE BU 411/
 PROPIONAL BU NAP
 PROPIONALDEHYDE BU NAP
 S-PROPYL-CYSTEINE-SULFOXIDE BU
 NAP
 N-PROPYL-MERCAPTAN BU NAP
 1-PROPYLTRITHIO-PROPANE
 EO NAP
 PROSTAGLANDIN-A-1 1 BU NAP
 PROTEIN 10,940-162,000 BU CRC PED
 USA
 PROTEIN 18,000-231,000 LF CRC
 PROTOCATECHUIC-ACID 4,500-17,540
 BU CRC(FSN) HHB
 PUFA 620-6,005 BU USA
 PYROCATECHOL BU NAP
 PYRUVIC-ACID 1,034 FR JU? NAP
 QUERCETIN 0-48,100 BU HHB NAP
 QUERCETIN-3-O-BETA-D-GLUCOSIDE
 0-40 BU ABS
 QUERCETIN-4-O-BETA-D-GLUCOSIDE
 100-800(12,200) BU ABS
 QUERCETIN-3,4'-DI-O-BETA-D-GLU-
 COSIDE 1,700-5,600 BU ABS
 QUERCETIN-4',7-DI-O-BETA-D-GLU-
 COSIDE 0-160 BU ABS
 QUINIC-ACID BU NAP
 RAFFINOSE BU NAP
 RHAMNOSE BU NAP
 RIBOFLAVIN 0.4-15 BU CRC PED
 RIBOSE BU NAP
 RUBIDIUM 0.14-6.6 BU AAS
 RUTIN BU NAP
 SAPONIN BU
 SELENIUM 0.00076-0.003 BU USG
 SELENO-HOME-CYSTINE PL NAP
 SELENO-METHIONINE BU NAP
 SELENO-METHYL-SELENOCYSTEINE
 BU NAP
 SELENO-METHYL-
 SELENOMETHIONINE BU NAP

SELENOSIDE PL NAP
 SERINE 350-3,815 BU USA
 SFA 260-2,520 BU USA
 SILICON 1-75 BU AAS
 SILVER 0.038-0.054 BU USG
 SINAPIC-ACID BU NAP
 ALPHA-SITOSTEROL BU NAP
 BETA-SITOSTEROL BU NAP
 SODIUM 8-2,052 BU CRC USA USG
 SPIRAEOSIDE 10,000-11,300 BU HHB
 NAP
 STEARIC-ACID 20-195 BU USA
 STIGMAST-7-EN-3-BETA-OL SD NAP
 STIGMASTEROL BU
 STRONTIUM 57-162 BU USG
 SUCCINIC-ACID BU NAP
 SUCROSE 82,600-145,900 BU NAP
 SULFUR 80-4,075 BU AAS USG
 TARTARIC-ACID BU NAP
 THIAMIN 0.3-6 BU CRC USA
 THIAMIN 0.5-6.4 LF CRC
 THIOPROPANAL-S-OXIDE BU 411/
 THIOPROPIONAL-S-OXIDE BU NAP
 THREONINE 280-3,052 BU USA
 TITANIUM 0.38-11 BU USA
 ALPHA-TOCOPHEROL 0.4-30 BU USA
 BETA-TOCOPHEROL SD NAP
 CIS-3,5-DIETHYL-1,2,4-TRITHIOLANE
 LF CCO
 TRANS-3,5-DIETHYL-1,2,4,-
 TRITHIOLANE LF CCO
 TRANS-S-(1-PROPENYL)-CYSTEINE-
 SULFOXIDE BU
 TRIGONELLINE 13 SD NAP
 9,12,13-TRIHYDROXY-OCTADEC-10-
 ENOIC-ACID BU NAP
 9,10,13-TRIHYDROXY-OCTADEC-11-
 ENOIC-ACID BU NAP
 TRYPTOPHAN 170-1,853 BU USA
 TSEPOSIDES SD NAP
 TULIPOSIDE-A RT NAP
 TULIPOSIDE-B RT NAP
 TYROSINE 290-3,161 BU USA
 VALINE 270-2,943 BU USA
 VANILLIC-ACID 258 BU CRC(FSN)
 VIT-B6 1-18 BU USA
 WATER 866,000-918,000 BU CRC USA
 USG
 WATER 922,000 LF CRC
 XYLITOL BU NAP
 XYLOSE BU NAP
 ZINC 34 SD ABS 5/
 ZINC 2-53 BU USA USG
 ZIRCONIUM 0.76-1 BU USG

5/Abs=Pak.J.Sci.Ind.Res.28:234.1985.

AAS=ACTA AGRIC SCAND SUPPL 22

H2O=87%; ZMB=7.7 X APB

ALLIUM SATIVUM L.

“GARLIC”

ADENOSINE BU NAP
 AJOENE BU 411/
 CIS-AJOENE BU NAP
 TRANS-AJOENE 268 BU NAP
 ALANINE 1,320-3,168 BU USA
 ALLICIN 1,500-27,800 BU NAP
 ALLIIN BU 5,000-10,000 NAP
 ALLIINASE BU 411/
 ALLISATIN PL NAP
 ALLISTATIN-I BU
 ALLISTATIN-II BU
 ALLIXIN BU NAP
 S-ALLO-MERCAPTO-CYSTEINE 2 BU
 NAP
 S-ALLYL-CYSTEINE 10 BU NAP
 S-ALLYL-CYSTEINE-SULFOXIDE BU
 NAP
 ALLYL-DISULFIDE BU NAP
 ALLYL-METHYL-DISULFIDE BU NAP
 ALLYL-METHYL-TRISULFIDE BU 411/
 ALLYL-PROPYL-DISULFIDE 36-216 BU
 ALUMINUM 52 BU PED
 ANILINE TR-10 BU JAF37:729
 ARACHIDONIC-ACID BU PAS
 ARGININE 6,340-15,216 BU USA
 ASCORBIC-ACID 100-788 BU CRC USA
 ASCORBIC-ACID 440-3,793 FL CRC
 ASCORBIC-ACID 390-2,868 LF CRC
 ASCORBIC-ACID 420-1,883 SH CRC
 ASH 10,000-395,000 BU CRC
 ASH 6,000-52,000 FL CRC
 ASH 10,000-74,000 LF CRC
 ASH 7,000-31,000 SH CRC
 ASPARTIC-ACID 4,890-11,736 BU USA
 BIOTIN 22 BU NAP
 BORON 3-6 BU BOB
 5-BUTYL-CYSTEINE-SULFOXIDE BU
 NAP
 CAFFEIC-ACID 20 BU CRC(FSN)
 CALCIUM 180-4,947 BU CRC USA
 CALCIUM 250-2,155 FL CRC
 CALCIUM 580-4,265 LF CRC
 CALCIUM 120-538 SH CRC
 CALCIUM-OXALATE BU NAP
 CARBOHYDRATES 274,000-851,000 BU
 CRC USA

- CARBOHYDRATES 94,000-810,000 FL CRC
 CARBOHYDRATES 95,000-699,000 LF CRC
 CARBOHYDRATES 201,000-901,000 SH CRC
 S-(2-CARBOXY-PROPYL)-GLUTATHIONE 92.5 BU NAP
 BETA-CAROTENE 0-0.17 BU CRC PED USA
 BETA-CAROTENE 0.6-5 FL CRC
 BETA-CAROTENE 9-68 LF CRC
 BETA-CAROTENE 2-9 SH CRC
 CHLOROGENIC-ACID PL PAS
 CHOLINE BU
 CHROMIUM 2.5-15 BU PED ABS 5/
 CITRAL BU 411/
 COBALT 0.5-100 BU PED ABS 5/
 COPPER 4.8-9.7 BU ABS USA
 P-COUMARIC-ACID 58 BU CRC(FSN)
 CYCLOALLIN BU NAP
 CYSTINE 650-1,560 BU USA
 DESGALACTOTIGONIN 400 RT NAP
 DESOXYRIBONUCLEASE BU
 DIALLYL-DISULFIDE 16-613 BU JAF37:729
 DIALLYL-SULFIDE 2-99 BU JAF37:729
 DIALLYL-TETRASULFIDE BU 411/
 DIALLYL-TRISULFIDE 10-1,061 BU JAF37:729
 3,5-DIETHYL-1,2,4-TRITHIOLANE 0.15-43 BU JAF37:729
 DIGALACTOSYL-DIGLYCERIDE BU NAP
 1,2-DIMERCAPTOCYCLOPENTANE TR-2.4 BU JAF37:729
 DIMETHYL-DISULFIDE 0.6-2.5 BU JAF37:729
 DIMETHYL-DIFURAN 5-30 BU JAF37:729
 DIMETHYL-SULFIDE BU
 2,5-DIMETHYL-TETRAHYDROTHIOPHENE TR-0.6 BU JAF37:729
 DIMETHYL-TRISULFIDE 0.8-19 JAF37:729BU
 1,3-DITHIANE 0.08-3 BU JAF37:729
 EICOSAPENTAENOIC-ACID BU NAP
 EO 600-3,600 BU JAD
 1,2-EPITHIOPROPANE 0.1-1.66 BU JAF37:729
 S-ETHYL-CYSTEINE-SULFOXIDE BU NAP
 FAT 2,000-12,000 BU CRC USA
 FAT 2,000-17,000 FL CRC
 FAT 5,000-37,000 LF CRC
 FAT 3,000-13,000 SH CRC
 FERULIC-ACID 27 BU CRC(FSN)
 FIBER 7,000-39,000 BU CRC USA
 FIBER 8,000-69,000 FL CRC
 FIBER 18,000-132,000 LF CRC
 FIBER 17,000-76,000 SH CRC
 FOLIACIN 1 BU USA
 FRUCTOSE BU NAP
 GERANIOL BU 411/
 GERMANIUM 754??? BU NAP
 GIBBERELLIN-A-3 BU NAP
 GIBBERELLIN-A-7 BU NAP
 GITONIN 300 RT NAP
 GLUCOSE BU NAP
 GLUTAMIC-ACID 8,050-19,320 BU USA
 GAMMA-L-GLUTAMYL-S-ALLYL-CYSTEINE BU NAP
 GAMMA-L-GLUTAMYL-S-BETA-CARBOXY-BETA-METHYL-ETHYL-CYSTEINYL-GLYCINE BU NAP
 GAMMA-L-GLUTAMYL-S-(2-CARBOXY-1-PROPYL)-CYSTEINEGLYCINE PL JSG
 GAMMA-L-GLUTAMYL-S-ALLYL-MERCAPTO-CYSTEINE BU NAP
 GAMMA-L-GLUTAMYL-ISOLEUCINE BU
 GAMMA-L-GLUTAMYL-L-LEUCINE BU
 GAMMA-L-GLUTAMYL-METHIONINE BU
 GAMMA-L-GLUTAMYL-S-METHYL-L-CYSTEINE-SULFOXIDE BU NAP
 GAMMA-L-GLUTAMYL-L-PHENYLALANINE BU
 GAMMA-L-GLUTAMYL-S-PROPYL-L-CYSTEINE BU NAP
 GAMMA-L-GLUTAMYL-L-VALINE
 GLUTATHIONE BU USA
 GLYCEROL-SULFOQUINOVOSIDE BU NAP
 GLYCINE 2,000-4,800 BU USA
 GUANOSINE BU NAP
 HEXA-1,5-DIENYL-TRISULFIDE BU NAP
 1-HEXANOL TR-0.23 BU JAF37:729
 HEXOKINASE BU NAP
 HISTIDINE 1,130-2,712 BU USA
 P-HYDROXYBENZOIC-ACID PL PAS
 IODINE BU
 IRON 15-129 BU CRC USA ABS 5/
 IRON 9-78 FL CRC

IRON 6-44 LF CRC
 IRON 17-76 SH CRC
 ISOBUTYL-ISOTHIOCYANATE 0.14-25
 BU JAF37:729
 ISOLEUCINE 2,170-5,208 BU USA
 KAEMPFEROL PL PAS
 KILOCALORIES 1,170-3,630 BU CRC
 KILOCALORIES 390-3,366 FL CRC
 KILOCALORIES 440-3,240 LF CRC
 KILOCALORIES 760-3,410 SH CRC
 LEUCINE 3,050-7,392 BU USA
 LINALOOL BU 411/
 LINOLENIC-ACID PL PAS
 LYSINE 2,730-6,552 BU USA
 MAGNESIUM 240-1,210 BU PED USA
 MANGANESE 5.4-15.3 BU ABS USA
 METHIONINE 760-1,824 BU USA
 METHYL-ALLYL-DISULFIDE 6-104 BU
 JAF37:729
 METHYLALLYL-SULFIDE 0.5-4.6 BU
 JAF37:729
 METHYLALLYL-TRISULFIDE 6-279 BU
 JAF37:729
 2-METHYLBENZALDEHYDE TR-0.1 BU
 JAF37:729
 3-METHYL-2-CYCLOPENTENE-1-
 THIONE 0.16-1.6 BU JAF37:729
 S-METHYL-CYSTEINE BU NAP
 S-METHYL-CYSTEINE-SULFOXIDE BU
 NAP
 24-METHYLENE-CYCLOARTENOL PL
 PAS
 S-METHYL-L-CYSTEINE-SULFOXIDE
 BU HHB
 1-METHYL-2-(PROP-2-ENYL)-
 DISULFANE BU NAP
 1-METHYL-1,2-(PROP-2-ENYL)-
 DISULFANE BU NAP
 1-METHYL-3-(PROP-2-ENYL)-
 TRISULFANE BU NAP
 METHYL-PROPYL-DISULFIDE 0.03-0.66
 BU JAF37:729
 4-METHYL-5-VINYLTIAZOLE TR-0.75
 BU JAF37:729
 MONOGALACTOSYL-DIGLYCERIDE
 BU NAP
 MYROSINASE BU HHB
 NIACIN 4-17 BU CRC USA
 NIACIN 4-34 FL CRC
 NIACIN 6-44 LF CRC
 NIACIN 5-22 SH CRC
 NICKEL 1.5-1.7 BU ABS 5/
 NICOTINIC-ACID 4.8 BU NAP
 OLEANOLIC-ACID PL PAS
 OLEIC-ACID PL PAS
 ORNITHINE LF NAP
 PEROXIDASE BU
 ALPHA-PHELLANDRENE BU 411/
 BETA-PHELLANDRENE BU 411/
 PHENYLALANINE 1,830-4,392 BU USA
 PHLOROGLUCINOL PL PAS
 PHOSPHATIDYL-CHOLINE BU NAP
 PHOSPHATIDYL-ETHANOLAMINE BU
 NAP
 PHOSPHATIDYL-INOSITOL BU NAP
 PHOSPHATIDYL-SERINE BU NAP
 PHOSPHORUS 880-5,220 BU CRC USA
 PHOSPHORUS 460-3,966 FL CRC
 PHOSPHORUS 460-3,382 LF CRC
 PHOSPHORUS 520-2,332 SH CRC
 PHYTIC-ACID PL PAS
 POTASSIUM 3,730-13,669 BU CRC USA
 POTASSIUM 3,260-23,971 LF CRC
 POTASSIUM 2,730-12,242 SH CRC
 PROLINE 1,000-2,400 BU USA
 2-PROPEN-1-OL 0.1-121 BU
 JAF37:729
 PROPENE 0.01-6 BU JAF37:729
 PROPENETHIOL 1-41 BU JAF37:729
 PROP-2-ENYL-DISULFANE BU NAP
 1,2-(PROP-2-ENYL)-DISULFANE BU
 NAP
 TRANS-1-PROPENYL-METHYL-
 DISULFIDE TR-0.9 BU JAF37:729
 S-PROPENYL-CYSTEINE BU NAP
 S-PROPYL-CYSTEINE-SULFOXIDE BU
 NAP
 TRANS-S-(PROPENYL-1-YL)-CYSTEINE-
 DISULFIDE BU NAP
 PROSTAGLANDIN-A-1 BU NAP
 PROSTAGLANDIN-A-2 NU NAP
 PROSTAGLANDIN-B-1 BU NAP
 PROSTAGLANDIN-B-2 NU NAP
 PROSTAGLANDIN-E-1 BU NAP
 PROSTAGLANDIN-E-2 NU NAP
 ALPHA-PROSTAGLANDIN-F-1 BU NAP
 ALPHA-PROSTAGLANDIN-F-2 NU NAP
 PROTEIN 35,000-179,000 BU CRC PED
 USA
 PROTEIN 14,000-121,000 FL CRC
 PROTEIN 26,000-191,000 LF CRC
 PROTEIN 12,000-54,000 SH CRC
 PROTODEGALACTOTIGONIN 10 BU
 NAP
 PROTOERUBOSIDE-B 100 BU NAP
 PSEUDOSCORIDININE-A BU NAP
 PSEUDOSCORIDININE-B BU NAP
 QUERCETIN 200 BU NAP

QUERCETIN-3-O-BETA-D-GLUCOSIDE
 PL PAS
 RAFFINOSE BU NAP
 RIBOFLAVIN 0.5-3 BU CRC USA
 RIBOFLAVIN 0.6-5.2 FL CRC
 RIBOFLAVIN 1.4-10.3 LF CRC
 RIBOFLAVIN 0.6-2.7 SH CRC
 RUTIN PL PAS
 SAPONIN BU
 SATIVOSIDE-B-1 30 BU NAP
 SATIVOSIDE-R-1 500 RT NAP
 SATIVOSIDE-R-2 300 RT NAP
 SCORDINE 250 BU NAP
 SCORDININ-A 39,000 BU NAP
 SCORODININ-A-1 67-30,000 BU NAP
 SCORODININ-A-2 250-8,000 BU NAP
 SCORODININE-A-3 333 BU NAP
 SCORODININ-B 800 BU NAP
 SCORODOSE BU NAP
 SELENIUM 16 BU PED
 SERINE 1,900-4,560 BU USA
 SILICON TR BU PED
 SINAPIC-ACID 27 PL CRC(FSN)
 BETA-SITOSTEROL PL PAS
 SODIUM 158-559 BU CRC USA
 SODIUM 40-294 LF CRC
 STIGMASTEROL PL PAS
 SUCCINIC-ACID PL PAS
 SUCROSE BU NAP
 TAURINE PL PAS
 THIAMACORNINE BU NAP
 THIAMAMIDINE BU NAP
 THIAMIN 2-8 BU CRC USA
 THIAMIN 1.1-9.5 FL CRC
 THIAMIN 1.1-8.1 LF CRC
 THIAMIN 1.4-6.3 SH CRC
 THREONINE 1,570-3,768 BU USA
 TIN 6 BU PED
 ALPHA-TOCOPHEROL BU PAS
 BETA-TOCOPHEROL BU PAS
 2,3,4-TRITHIAPENTANE BU
 TRYPTOPHAN 660-1,584 BU USA
 TYROSINE 810-1,944 BU USA
 TYROSINASE BU
 URANIUM BU
 VALINE 2,910-6,984 BU USA
 2-VINYL-4H-1,3-DITHIIN 2-29 BU
 JAF37:729
 3-VINYL-4H-1,2-DITHIIN 0.34-10.65 BU
 JAF37:729
 VIT-U TR NAP
 WATER 585,000-678,000 BU CRC PED
 USA
 WATER 884,000 FL CRC

WATER 864,000 LF CRC
 WATER 777,000 SH CRC
 ZINC TR-15.3 BU PED ABS 5/

5/Abs=Pak.J.Sci.Ins.Res.28:234.1985. PED
 values often a magnitude high or lower.
 PAS= Paul Stitt, *WHY GEORGE SHOULD
 EAT BROCCOLI*, based on NAPRALERT,
 but data may apply to onion as well as
 garlic, e.g. onion may have more pros-
 taglandin.

ALLIUM SCHOENOPRASUM L.

"CHIVES"

ALANINE 1,260-15,750 LF USA
 ALLITHIAMINE PL PEP
 ALLYL-DISULFIDE PL PEP
 ALLYL-MERCAPTAN PL PEP
 ARGININE 2,020-25,250 LF USA
 ASCORBIC-ACID 57-9,875 LF CRC HHB
 USA
 ASH 4,000-100,000 LF CRC USA
 ASPARTIC-ACID 2,590-32,375 LF USA
 CAFFEIC-ACID <0.5 LF CRC(FSN)
 CALCIUM 690-10,375 LF CRC USA
 CARBOHYDRATES 38,000-667,000 LF
 CRC USA
 BETA-CAROTENE 34-475 LF CRC USA
 CITRIC-ACID LF NAP
 P-COUMARIC-ACID 21 LF CRC(FSN)
 1-O-P-COUMAROYL-BETA-D-GLUCOSE
 LF NAP
 DESOXYRIBONUCLEIC-ACID PL PEP
 3,5-DIETHYL-1,2,4-TRITHIOLANE LF
 NAP
 DIPROPYL-DISULFIDE EO NAP
 DOTRIACONTANAL PL PEP
 FAT 3,000-75,000 LF CRC USA
 FERULIC-ACID <0.5 LF CRC(FSN)
 FUMARIC-ACID LF NAP
 1-O-FERULOYL-BETA-D-GLUCOSE LF
 NAP
 FIBER 7,000-137,500 LF CRC USA
 GALACTOSE PL PEP
 GLUCOSE PL PEP
 GLUTAMIC-ACID 5,790-72,385 LF USA
 GAMMA-GLUTAMYL-S-
 ALLYL-CYSTEINE PL JSG
 GAMMA-GLUTAMYL-PEPTIDASE PL
 PEP
 GAMMA-GLUTAMYL-PEPTIDE PL PEP
 GAMMA-GLUTAMYL-TRIPEPTIDE PL
 PEP

GLYCINE 1,390-17,375 LF USA
 HISTIDINE 480-6,000 LF USA
 IRON 8-200 LF CRC USA
 ISOLEUCINE 1,190-14,875 LF USA
 ISORHAMNETIN-GLYCOSIDE PL PEP
 KAEMPFEROL 6-55 LF NAP
 KAEMPFEROL-DIGLUCOSIDE PL PEP
 KAEMPFEROL-GLUCOSIDE PL PEP
 KAEMPFEROL-TRIGLUCOSIDE PL PEP
 LEUCINE 1,670-20,875 LF USA
 LINOLEIC-ACID 2,220-27,750 LF USA
 ALPHA-LINOLENIC-ACID 130-1,625 LF
 USA
 MAGNESIUM 550-6,875 LF USA
 MALIC-ACID LF NAP
 METHIONINE 300-3,750 LF USA
 METHYL-ALLYL-ALLITHIAMINE PL
 PEP
 2-METHYL-2-BUTENAL PL PEP
 METHYL-DISULFIDE PL PEP
 2-METHYL-2-PENTENAL PL PEP
 METHYL-PENTYL-DISULFIDE EO NAP
 METHYL-PROPYL-DISULFIDE PL PEP
 MYRISTIC-ACID 30-375 LF USA
 NIACIN 5-88 LF USA
 OCTACOSANOL PL PEP
 OLEIC-ACID 840-10,500 LF USA
 OXALIC-ACID PL PEP
 PALMITIC-ACID 910-11,375 LF USA
 PANTOTHENIC-ACID 2-22 LF USA
 PENTYL-HYDRO-DISULFIDE 25,000 EO
 NAP
 CIS-PENTYL-HYDRO-DISULFIDE EO
 NAP
 TRANS-PENTYL-HYDRO-DISULFIDE
 EO NAP
 PHENYLALANINE 900-11,250 LF USA
 PHOSPHORUS 410-6,437 LF CRC USA
 POTASSIUM 2,500-31,250 LF CRC USA
 PROLINE 1,850-23,125 LF USA
 CIS-PROPENYL-PROPYL-DISULFIDE PL
 PEP
 TRANS-PROPENYL-PROPYL-DISULFIDE
 PL PEP
 S-(PROPENYL—1-YL)-CYSTEINE-
 SULFOXIDE PL PEP
 PROPYL-ALLYL-ALLITHIAMINE PL
 PEP
 PROTEIN 18,000-350,000 LF CRC USA
 QUERCETIN 4-9 LF NAP
 QUINIC-ACID LF NAP
 RIBOFLAVIN 1-22 LF CRC USA
 SAPONIN LF HHB
 SCORDININE PL PEP

SERINE 1,260-15,750 LF USA
 SODIUM 60-750 LF CRC USA
 STEARIC-ACID 80-1,000 LF USA
 SUCCINIC-ACID LF NAP
 THIAMIN 1-12 LF CRC USA
 THREONINE 1,110-13,875 LF USA
 TRIACONTANAL PL PEP
 TRYPTOPHAN 310-3,875 LF USA
 TYROSINE 810-10,125 LF USA
 VALINE 1,240-15,500 LF USA
 VIT-B-6 2-22 LF USA
 WATER 913,000-920,000 LF CRC USA

ALNUS GLUTINOSA (L.)

GAERTN.

“BLACK ALDER”

ALNINCANONE PL JSG
 ALNULIN BK CRC
 ALNUSFOLIENDIOLONE LF CRC
 DELTA-AMYRENONE LF CRC
 BRASSINOLIDE PL JSG
 CASTASTERONE PL JSG
 CITRULLIN BK CRC
 EMODIN? BK HHB
 GLUTINONE BK CRC
 3-BETA-HYDROXYGLUTIN-5-EN LF
 HHB
 HYPEROSIDE BK CRC
 LUPEOL BK CRC
 L-ORNITHINE LF CRC
 PHLOBAPHENE BK CRC
 PROTOALNULIN BK CRC
 BETA-SITOSTEROL BK CRC
 SUCROSE LF HHB
 TANNIN 200,000 BK CRC
 TARAXEROL BK CRC
 TARAXERONE PL JSG

ALOCASIA MACRORRHIZA (L.)

G. DON

“GIANT TARO”

ALPHA-ALANINE PL PEP
 ALUMINUM 3.6-12 RT B&H
 AMYLOSE PL PEP
 ASCORBIC-ACID 50 LF B&H
 ASCORBIC-ACID TR-572 RT B&H
 ASH 8,000-17,700 LF B&H CRC
 ASH 3,000-30,975 RT B&H CRC
 ASPARAGINE PL PEP
 BORON 1-3.3 RT B&H
 CALCIUM 570-15,700 LF B&H CRC

CALCIUM 281-1,875 RT B&H CRC
 CALCIUM-OXALATE 370 RT B&H
 CARBOHYDRATES 520,000 LF CRC
 CARBOHYDRATES 30,000-925,000 RT
 B&H CRC
 BETA-CAROTENE 0 RT CRC
 CITRATES 2,380-10,600 RT B&H
 CITRIC-ACID PL PEP
 COPPER 0.7-2.4 RT B&H
 CYTOCHROME-B-3 PL PEP
 DEHYDROASCORBIC-ACID 92-310 RT
 B&H
 FAT 1,000-63,000 LF B&H CRC
 FAT 1,000-19,000 RT B&H CRC
 FIBER 10,000-1257,000 LF B&H
 FIBER 18,500-62,290 RT B&H
 FLAVOPROTEIN PL PEP
 FRUCTOSE PL PEP
 GLUCOSE PL PEP
 BETA-GLUCOSIDASE PL PEP
 GLUTAMINE PL PEP
 HCN PL PEP
 IRON 6-38 LF B&H
 IRON 5-63 RT B&H CRC
 ISOTRIGLOCHIN PL PEP
 KILOCALORIES 610-3,815 RT CRC
 BETA-LECTINS PL PEP
 MAGNESIUM 520-1,750 RT B&H
 MALATES 3,200-12,330 RT B&H
 MALIC-ACID PL PEP
 MANGANESE 6-21 RT B&H
 NIACIN 4.8-16 RT B&H
 OXALATE 300-1,280 RT B&H
 OXALIC-ACID PL PEP
 PHOSPHORUS 250-1,400 LF B&H CRC
 PHOSPHORUS 440-3,125 RT B&H CRC
 POTASSIUM 2,670-9,000 RT B&H
 PROTEIN 3,000-43,000 LF B&H
 PROTEIN 6,000-240,000 RT B&H CRC
 RIBOFLAVIN 0.1-3.4 LF B&H
 RIBOFLAVIN 0.2-0.6 RT B&H
 SODIUM 300-1,010 RT B&H
 STARCH 215,000-723,900 RT B&H
 SUCCINATES 2,900-15,000 RT B&H
 SUCCINIC-ACID PL PEP
 SUCROSE PL PEP
 SUGAR 5,000-33,325 RT B&H
 SULFUR 119-400 RT B&H
 THIAMIN 0.1-0.9 LF B&H
 THIAMIN 0.2-3 RT B&H CRC
 TRIGLOCHIN PL PEP
 WATER 630,000-870,000 RT B&H
 ZINC 15-51 RT B&H

ALOE VERA (L.) BURM. f.

"BITTER ALOES"

ALBUMIN 1-5 LF ARC
 ALEOSONE PL PEP
 ALIINASE PL PEP
 ALOCUTIN-A PL PEP
 ALOE-EMODIN PL PEP
 ALOE-EMODIN-ANTHRANOL PL PEP
 ALOENIN PL PEP
 ALOESIN PL RAA
 ALOESOL PL PEP
 ALOESONE PL RAA
 ALOETIC-ACID PL PEP
 ALOETIN PL PEP
 ALOETINIC-ACID PL JSG
 ALOINOSE PL PEP
 ALOINOSIDE-A PL PEP
 ALOINS 270,000-300,000 MPI
 ALUMINUM 22 LF PED
 AMYLASE 0-20 LF ARC
 ANTHRACENE
 ANTHRANOLS PL PEP
 ANTHRAQUINONE-GLYCOSIDE PL PEP
 ANTHRAQUINONES
 ANTHROL PL PEP
 APOISE PL PEP
 ARABINAN PL PEP
 ARABINOSE AYL
 ASCORBIC-ACID 6,260 LF PED
 L-ASPARAGINE PL PEP
 ASPARTIC-ACID PL PEP
 BARBALOIN 42,400 MPI
 BETA-BARBALOIN MPI
 BENZYLACETONE PL PEP
 CALCIUM 190-4,600 LF FNF PED
 CALCIUM-OXALATE PL PEP
 CAMPESTEROL PL PEP
 CARBOHYDRATES 896,000 LF PED
 BETA-CAROTENE 3 LF PED
 CASANTHRANOL-I PL PEP
 CASANTHRANOL-II PL PEP
 CATALASE PL PEP
 ALPHA-CELLULOSE PL PEP
 CHLORIDE 10-110 LF ARC
 CHOLESTEROL 40-120 LF ARC
 CHOLINE PL PEP
 CHOLINE-SALICYLATE PL PEP
 CHROMIUM TR LF PED
 CHRYSAMMINIC-ACID PL PEP
 CHRYSOPHANIC-ACID PL PEP
 CHRYSOPHANOL PL PEP

CHRYSOPHANOL-GLYCOSIDE PL PEP
 PL PEP
 CINNAMIC-ACID
 COBALT TR LF PED
 CONIFERYL-ALCOHOL PL PEP
 P-COUMARIC-ACID PL PEP
 COUMARIN PL PEP
 CREATININE 1-15 LF ARC
 DI-(2-ETHYLHEXYL)-PHTHALATE PL
 PEP
 1,8-DIHYDROXYANTHRACENE PL PEP
 EMODIN PL PEP
 FAT 8,000 LF PED
 FIBER 177,000 LF PED
 FOLIC-ACID 27-200 LF ARC
 FORMIC-ACID PL PEP
 FRUCTOSE PL PEP
 D-GALACTAN PL PEP
 GALACTOSE PL PED
 D-GALACTOURONIC-ACID PL PEP
 GLOBULIN 0-2 LF ARC
 D-GLUCITOL PL PEP
 GLUCOSAMINE PL PEP
 GLUCOSE 280-1030 LF ARC
 GLUCOMANNAN PL PEP
 GLYCEROL PL PEP
 HECOGENIN PL PEP
 HEXAURONIC-ACID PL PEP
 HOMONATALOIN PL PEP
 7-HYDROXY-CHROMONE PL PEP
 HYDROCINNAMIC-ACID PL PEP
 7-HYDROXYALOIN PL RAA
 HYDROXYMETHYLANTHRAQUINONE
 PL PEP
 IRON 30-300 LF ARC
 ISOBARBALOIN PL MPI
 KILOCALORIES 2,800 LF PED
 LIGNIN PL PEP
 LIPASE 0-16 LF ARC
 LUPEOL PL RAA
 MAGNESIUM 930 LF PED
 MANGANESE 6 LF PED
 MANNOSE PL PEP
 P-METHOXYBENZYLACETONE PL PEP
 P-METHOXY-HYDROCINNAMIC-ACID
 PL PEP
 2-METHYL-2-PHYTYL-6-CHROMANOL
 PL PEP
 8-METHYL-TOCOL PL PEP
 MUCILAGE PL PEP
 MUCOPOLYSACCHARIDES PL PEP
 NATALOIN PL PEP
 NIACIN 64 LF PED

NIACINAMIDE
 OXIDASE PL PEP
 PECTIC-ACID PL PEP
 PHOSPHORUS 6-940 LF ARC PED
 PHYTOSTEROLS PL PEP
 POLYPHENOLS PL PEP
 POLYURONIDE PL PEP
 POTASSIUM 100-850 LF PED ARC 1/
 PROTEIN 10,000-57,000 LF ARC PED
 PROTEINASE PL PEP
 M-PROTocatechuic-ALDEHYDE PL
 PEP
 PTEROYLGLUTAMIC-ACID PL PEP
 PURINE 1-56 LF ARC
 QUINONE PL PEP
 RESIN AYL
 RESITANNOLS
 RHAMNOSE
 RHEIN PL PEP
 RIBOFLAVIN TR LF PED
 SAPOGENIN PL PEP
 SAPONINS AYL
 SELENIUM 23 LF PED
 SILICON 22 LF PED
 BETA-SITOSTEROL PL PED
 SODIUM 40-510 LF ARC PED
 THIAMIN 0.8 LF PED
 THREITOL PL PEP
 TIN 11 LF PED
 TRIHYDROXYMETHYLANTHRAQUINONE
 PL PEP
 UREA 10 LF ARC
 URONIC-ACID PL PEP
 WATER 995,000 PL PED
 XYLOSE AYL
 ZINC 11-770 LF ARC 1/

Some data derived from Duke writeup, based
 on non-peer reviewed book by Coats and
 draft by Henry of the National Aloe
 Research Council=ARC under Aloe only
 (most ARC numerical data were in mg/dl) I
 know of no other plant where zinc is more
 prevalent than other minerals and protein.
 These data should be viewed as suspect.

ALOYSIA TRIPHYLLA (L'HER.) BRITTON

"LEMON VERBENA"

ACETIC-ACID PL GEO
 ALCOHOLS 200-1,400 PL GEO WOI
 ALLO-AROMADENDRENE 4-28 PL BML

- BICYCLOGERMACRENE 24-168 PL BML
 BORNEOL PL GEO
 GAMMA-CADINENE 2-14 PL BML
 DELTA-CADINENE 5-35 PL BML
 ALPHA-CADINOL 2-14 PL BML
 T-CADINOL 5-35 PL BML
 CAMPHENE TR PL BML
 L-CARVONE PL GEO
 CARYOPHYLLA-1-(12),8(15)-DIEN-9-
 ALPHA-OL PL BML
 CARYOPHYLLA-1-(12),7-DIEN-9-ALPHA-
 OL PL BML
 CARYOPHYLLA-1-(12),7-DIEN-9-BETA-
 OL PL BML
 CARYOPHYLLENE 30-266 PL BML
 BETA-CARYOPHYLLENE PL GEO
 CARYOPHYLLENE-OXIDE 20-140 PL
 BML
 ALPHA-CEDRENE PL GEO
 CEDROL 1-7 PL BML
 1,8-CINEOLE 30-420 PL BML
 CINEOLE 40-280 PL GEO WOI
 CITRAL 260-1,820 PL WOI
 ALPHA-CITRAL PL GEO
 BETA-CITRAL PL GEO
 CITRONELLOL 10-70 PL BML
 D-CITRONELLOL PL GEO
 CITRONELLYL-ACETATE 2-14 PL BML
 COPAENE 3-21 PL BML
 CUBEBENE 3-21 PL BML
 AR-CURCUMENE 30-315 PL BML
 BETA-CURCUMENE 20-140 PL BML
 P-CYMENE 1-7 PL BML
 DECANAL TR PL BML
 2,5-DIMETHYL-2-VINYL-4-HEXENAL
 PL BML
 DIPENTENE 110-770 PL GEO WOI
 EO 1,000-7,000 PL GEO WOI
 EPIPHOTOCITRAL-A 15-105 PL BML
 2,6-EPOXY-CARYOPHYLLANE TR PL
 BML
 ALPHA-FARNESENE 24-168 PL BML
 FARNESOL 1-7 PL BML
 FURFURAL PL GEO
 GERANIAL 150-1,820 PL BML
 GERANIOL 5-420 PL BML
 GERANYL-ACETATE 15-126 PL BML
 GERMACRENE-D 18-126 PL BML
 HEXANYL-ACETATE TR PL BML
 BETA-HEXENOL PL BML
 GAMMA-HEXENOL PL BML
 CIS-3-HEXENYL-ACETATE TR PL BML
 BETA-IONONE 2-14 PL BML
 ISOCARYOPHYLLENE TR PL BML
 ISOCARYOPHYLLENE-EPOXIDE PL
 BML
 2-ISOPROPYLIDEN-5-
 METHYLCYCLOPENTANONE TR PL
 BML
 ISOPULEGOL 1-7 PL BML
 ISOVALERIC-ACID PL GEO
 KUBOSONE TR PL BML
 LIMONENE 42-1,050 PL BML
 L-LIMONENE 110-770 PL GEO WOI
 TRANS-LIMONENE-EPOXIDE PL BML
 LINALOOL 5-35 PL BML
 BETA-MAALIENE 20-140 PL BML
 METHYL-HEPTENONE 17-280 PL BML
 T-MUUROLOL PL BML
 MYRCENE 1-7 PL BML
 NERAL 120-840 PL BML
 NEROL 52-364 PL BML
 NEROLIDOL 13-140 PL BML
 NEROL-OXIDE PL BML
 NERYL-ACETATE 40-280 PL BML
 CIS-OCIMENE 1-4 PL BML
 TRANS-OCIMENE 8-175 PL BML
 OCTANOL TR PL BML
 3-OCTANOL 1-7 PL BML
 3-OCTANONE 1-4 PL BML
 1-OCTEN-3-OL 10-70 PL BML
 PHOTOCITRAL-A PL BML
 PHOTOCITRAL-B PL BML
 ALPHA-PINENE 1-7 PL BML
 BETA-PINENE 5-35 PL BML
 PYRROLE PL GEO
 SABINENE PL BML
 TRANS-SABINENE-HYDRATE 2-14 PL
 BML
 SPATHULENOL 25-175 PL BML
 TANNIN PL 411/
 TERPINEN-4-OL 3-21 PL BML
 ALPHA-TERPINENE TR PL BML
 D-ALPHA-TERPINEOL 25-175 PL BML
 TERPINOLENE TR PL BML
 THUJOPSENE 2-14 PL BML
 VERBENONE PL GEO
-
- ALPINIA GALANGA* (L.) SW.
 "GREATER GALANGAL"
 1'-ACETOXYCHAVICOL-ACETATE
 15,000 SD CCO
 1'-ACETOXYCHAVICOL-ACETATE RT
 PM53:32.1987.

1'-ACETOXYEUGENOL-ACETATE RT
PM53:32.1987.
ASCORBIC-ACID 260-1,844 RH CRC
ASH 10,000-71,000 RH CRC
BASSORIN RH HHB
CADINENE RH HHB
CALCIUM 310-2,199 RH CRC
CAMPHOR RH GEO
CARBOHYDRATES 117,000-830,000 RH
CRC
BETA-CAROTENE 15-108 RH CRC
CARYOPHYLLENE-OXIDE SD CCO
CARYOPHYLLENOL-I SD CCO
CARYOPHYLLENOL-II SD CCO
CINEOLE 80-14,400 RH GEO
TRANS-3,4-DIMETHOXYCINNAMYL-
ALCOHOL RT ABS
EO 400-48,000 RH GEO HHB
EUGENOL 100-12,000 RH HHB
FAT 4,000-28,000 RH HHB
FIBER 31,000-220,000 RH HHB
GALANGIN RH HHB
GALANGIN-METHYL-ETHER RH HHB
GALANGOL RH HHB
TRANS-4-
HYDROXYCINNAMALDEHYDE ABS
IRON 21-149 RH CRC
KAEMPFERIDE RH HHB
TRANS-4-METHOXYCINNAMYL-
ALCOHOL ABS
METHYL-CINNAMATE 192-23,040 RH
GEO
NIACIN 10-71 RH CRC
PHLOBAPHEN RH HHB
PHOSPHORUS 250-1,773 RH CRC
D-PINENE RH HHB
PROTEIN 10,000-71,000 RH CRC
RESIN RH HHB
RIBOFLAVIN 0-1 RH CRC
STARCH RH HHB
TERPINEN-4-OL FUNGICIDE ABS
THIAMIN 1-4 RH CRC
WATER 859,000 RH CRC
WAX RH HHB

ALPINIA OFFICINARUM HANCE

“LESSER GALANGAL”

ALPINOL RH HHB
ALPHA-CADINENE RH CCO
1,8-CINEOLE RH CCO
DIHYDROYASHABUSHIKETOL RH CCO
DIOXYFLAVONAL

1,7-DIPHENYL-5-HYDROXY-3-
HEPTANONE RH CCO
1,7-DIPHENYLHEPT-4-EN-3-ONE RH
CCO
EO 3,000-10,000 RH GEO HHB
EUGENOL 90-400 RH GEO HHB
GALANGIN 1,000 RH HHB
GALANGIN-3-METHYL-ETHER RH HHB
GALANGOL RH HHB
5-HYDROXY-7-(4-HYDROXY-3-
METHOXYPHENYL)-1-PHENYL-
HEPTANONE
5-HYDROXY-7-(4"-HYDROXYPHENYL)1-
PHENYL-3-HEPTANONE RH 1/
5-HYDROXY-7-(4"-HYDROXY-3"-
METHOXYPHENYL)-1-PHENYL-3-
HEPT...
5-HYDROXY-7-(4"-HYDROXY-3"-
METHOXYPHENYL)-PHENYL-3-
HEPTANONE
7-(4"-HYDROXY-3"-METHOXYPHENYL)-
PHENYLHEPT-4-EN-3-ONE RH CCO
7-(4"-HYDROXY-3"-METHOXYPHENYL)-
1-PHENYL-3,5-HEPTADIONE RH
7-(4"-HYDROXY-3"-METHOXYPHENYL)-
1-PHENYLHEPT-4-EN-3-ONE RH
KAEMPFERID 600-800 RH HHB
LINALOOL RH 411/
MANGANESE (3.5-4%ASH)
5-METHOXY-7-(4"-HYDROXY-
3"METHOXYPHENYL)-1-PHENYL-3-
HEPTA...
METHYL-CINNAMATE
D-ALPHA-PINENE RH HHB
STARCH 200,000-250,000 RH HHB
TANNIN RH HHB
3,5,7-TRIHYDROXYFLAVONE PL JSG

ALTHAEA OFFICINALIS L.

“MARSHMALLOW”

ALTHEIN 20,000 RT
ALUMINUM 680 RT PED
L-ARABINAN
ARABINOGALACTAN PL PEP
ARABINOSE PL PEP
ALPHA-L-ARABINOFURANOSYL
ASCORBIC-ACID 1,640 SD PED
ASH 80,000 RT PED
ASPARAGINE 10,000-20,000 RT HHB
411/
BETAINE 40,000 RT HHB
BUTYRIC-ACID PL PEP

CAFFEIC-ACID LF 411/
 CALCIUM 8,160 RT PED
 CALCIUM-PHOSPHATE PL PEP
 CARBOHYDRATES 807,000 RT PED
 BETA-CAROTENE TR RT PED
 CHLOROGENIC-ACID PL JSG
 CHOLINE PL PEP
 CHROMIUM 15 RT PED
 COBALT 33 RT PED
 P-COUMARIC-ACID LF 411/
 DODECASACCHARIDE PL PEP
 EO 500-15,000 RT FNF PED
 ERUCIC-ACID PL PEP
 FAT 5,000 RT PED
 FAT 128,000-172,000 SD CRC
 FERULIC-ACID PL PEP
 FIBER 83,000 RT PED
 D-GALACTOSE PL PEP
 GALACTOURONIC-ACID PL PEP
 GALACTURONORHAMNOSE PL PEP
 GLUCAN PL PEP
 GLUCOSAN PL PEP
 D-GLUCURONIC-ACID LF RT
 D-GALACTURONIC-ACID RT, LF
 D-GLUCOSAMINES PL PEP
 HEMICELLULOSE PL PEP
 HEXASACCHARIDE PL PEP
 HEXOSE PL PEP
 P-HYDROXYACETIC-ACID PL PEP
 P-HYDROXYBENZOIC-ACID PL PEP
 8-HYDROXY-DIOSMETIN—8-GLU-
 COSIDE PL PEP
 IRON 1,150 RT PED
 KAEMPFEROL LF 411/
 KAEMPFEROL-3-GLUCOSIDE PL PEP
 KAEMPFEROL-3-BETA-D-(6"-O-P-
 HYDROXYCINAMOYL)-GLUCOSIDE
 PL PEP
 LANOLIN PL PEP
 LECITHIN RT HHB
 MAGNESIUM 5,180 RT PED
 MALVALIC-ACID PL PEP
 MANGANESE 44 RT PED
 METHYL-PENTOSE PL PEP
 MUCILAGE 62,000-350,000 RT PED WOI
 NIACIN 31 RT PED
 NONA-SACCHARIDE PL PEP
 PARAFFIN PL PEP
 PECTIN 110,000-350,000 RT HHB PED
 411/
 PENTOSANS PL PEP
 PHOSPHORUS 2,560 RT PED
 PHYTOSTEROLS RT HHB

POTASSIUM 12,100 RT PED
 PROTEIN 108,000 RT PED
 PROTEIN 227,000-237,000 SD CRC
 QUERCETIN LF 411/
 QUERCETIN-3-GLUCOSIDE PL PEP
 L-RHAMNOSE LF PEP
 RIBOFLAVIN 0.5 RT PED
 SALICYLIC-ACID LF 411/
 SCPOLETIN LF 411/
 SCOPOLINE PL JSG
 SELENIUM 33 RT PED
 SILICON 30 RT PED
 SODIUM 1,370 RT PED
 SODIUM-BORATE PL PEP
 SORBITOL PL PEP
 STARCH 300,000-380,000 RT WOI
 SUGAR 50,000-110,000 RT HHB PED
 SYRINGIC-ACID LF 411/
 TANNIN 20,000 RT HHB
 THIAMIN 1 RT PED
 TIN 29 RT PED
 URONIC-ACID PL PEP
 VANILLIC-ACID LF 411/
 WATER 892,000 RT PED
 XYLAN PL PEP
 XYLOSE PL PEP
 ZINC TR RT PED

AMARANTHUS SP

"PIGWEEED"

ALANINE 1,390-16,722 LF USA
 ARGININE 1,210-14,556 LF USA
 ASCORBIC-ACID 345-6,263 LF USA
 ASPARTIC-ACID 2,290-27,549 LF USA
 CALCIUM 1,559-53,333 LF USA
 CARBOHYDRATE 40,300-540,000 LF
 CRC USA
 BETA-CAROTENE 0-508 LF CRC USA
 COPPER 1-19 LF USA
 CYSTINE 290-3,489 LF USA
 FAT 2,410-53,000 LF CRC USA
 FIBER 8,830-135,000 LF CRC USA
 FOLACIN 1-10 LF USA
 GLUTAMIC-ACID 2,920-35,128 LF USA
 GLYCINE 1,320-15,880 LF USA
 HISTIDINE 520-6,256 LF USA
 IRON 23-1,527 LF USA
 ISOLEUCINE 1,190-14,316 LF USA
 LEUCINE 1,950-23,458 LF USA
 LYSINE 1,270-15,278 LF USA
 MAGNESIUM 550-6,616 LF USA
 METHIONINE 360-4,331 LF USA

NIACIN 6-118 LF CRC USA
 PHENYLALANINE 1,330-16,000 LF USA
 PHOSPHORUS 487-10,082 LF CRC USA
 POTASSIUM 2,630-73,503 LF CRC USA
 PROLINE 1,210-14,556 LF USA
 PROTEIN 22,850-342,000 LF CRC USA
 RIBOFLAVIN 1-26 LF CRC USA
 RUTIN PL JSG
 SERINE 1,110-13,353 LF USA
 SODIUM 110-2,406 LF CRC USA
 THIAMIN 1-7 LF CRC USA
 THREONINE 990-11,910 LF USA
 TRYPTOPHAN 310-3,729 LF USA
 TYROSINE 800-9,624 LF USA
 VALINE 1,370-16,481 LF USA
 WATER 916,000 LF CRC USA
 ZINC 9-108 LF

AMMI MAJUS L.

“BISHOP’S WEED”

5-[2-(ACETOXY)-3-HYDROXY-3-METHYLBUTOXY]-PSORALEN 1,000 SD
 O-ALKLY-FUROCOUMARIN PL PEP
 ALLOIMPERATORIN 1 SD RIZ
 AMMAJIN SD HHB
 AMMIDIN PL PEP
 AMMIFURIN SD RIZ
 AMMIRIN SD RIZ
 AMMOIDIN PL PEP
 ANGALCIN PL PEP
 ANGELICIN PL PEP
 ANGENOMALIN PL JSG
 BERGAPTEN 400-3,100 SD RIZ
 CALCIUM-OXALATE SD HHB
 CAMESOL PL PEP
 CAMPESELOL PL PEP
 CAMPESENIN PL PEP
 CAMPESIN PL PEP
 CELLULOSE 224,000 SD HHB
 COUMARINIC-ACID PL PEP
 DELTOIN PL PEP
 DIHYDROOROSELSEONE PL PEP
 EO(ASS.) 10,000 SD JAD
 FAT 129,400 SD HHB
 FURANOCHROMONE PL PEP
 FURANOCOUMARIN PL PEP
 FUROCOUMARIN PL PEP
 GLYCOSIDES 10,000 SD HHB
 HERACLENIN 700 SD RIZ
 5-HYDROXYMARMESIN PL PEP
 IMPERATORIN 100-8,000 SD RIZ

ISOIMPERATORIN SD HHB
 ISOPIMPINELLIN SD HHB
 ISOQUERCETIN SD RIZ
 ISORHAMNETIN PL PEP
 ISORHAMNETIN-3-GLUCOSIDE LF RIZ
 ISORHAMNETIN-3-GLUCURONIDE LF RIZ
 ISORHAMNETIN-3-RUTINOSIDE LF RIZ
 KAEMPFEROL-7-O-GLUCOSIDE SD RIZ
 KHELLIN PL PEP
 LUTEOLIN PL PEP
 LUTEOLIN-7-GLUCOSIDE PL PEP
 LUTEOLIN-GLYCOSIDES LF RIZ
 MAJUDIN PL PEP
 MAJURIN SD RIZ
 MARMESIN 400-3,300 SD RIZ
 (C₁₄H₁₄O₄)
 MARMESININ 100-1,450 SD RIZ
 METHOXSALIN PL PEP
 5-METHOXY-PSORALEN PL PEP
 8-METHOXY-PSORALEN PL PEP
 5-[2-(3-METHYLBUTYROXY)-3-HYDROXY-3-METHYLBUTOXY]-PS. 1,000
 8-[2-(3-METHYLBUTYROXY)-3-HYDROXY-3-METHYLBUTOXY]-PS. 100
 MUCILAGE SD HHB
 OLEIC-ACID PL PEP
 OLEORESIN 46,700 SD HHB
 OXYPEUCEDANIN 3,000 SD RIZ
 OXYPEUCEDANIN-HYDRATE 400 SD RIZ
 PABULENOL <100 SD RIZ
 PALMITIC-ACID PL PEP
 PIMPINELLIN PL PEP
 DL-PIPERITONE 1,000 SD RIZ
 PROTEIN 138,000 SD HHB
 PSORALENS 8,800 LF JAD
 PSORALENS 15,000-20,000 SD JAD
 QUERCETIN LF RIZ
 QUERCETIN-7-O-GLUCOSIDE SD RIZ
 QUERCETIN-3-RUTINOSIDE
 SAXALIN <100 SD RIZ
 SPHNODIN PL PEP
 TANNIN 4,500 SD HHB
 UMBELLIFERONE PL PEP
 UMBELLIPRENIN SD RIZ
 VISNIGIN PL PEP
 XANTHOTOXIN 2,300-20,000 SD JAD RIZ
 XANTHOTOXOL PL PEP
 ZOZYMIN PL PEP

AMMI VISNAGA (L.) LAM.**"VISNAGA"**

- ACACETIN PL HHB
 AMMIOL SD HHB
 ANTHOCYANIDIN PL PEP
 ARACHIDIC-ACID PL PEP
 ASTRAGALIN FL LF HHB
 AVISAN PL PEP
 BEHENIC-ACID PL PEP
 BENZOPYRONE PL PEP
 CAMPHOR EO WIC
 CARVONE EO WIC
 CHROMONES 11,460-15,900 FL HHB
 CHROMONES 4,080-4,880 LF HHB
 CHROMONES 70-120 RT HHB
 CHROMONES 200-260 PE HHB
 CINNAMIC-ACID PL PEP
 COUMARIN PL PEP
 DELPHINIDIN PL PEP
 DIHYDROSAMIDIN SD HHB
 DIHYDROSELINE PL PEP
 3',4'-DIHYDROXY-3',4'-
 DIHYDROSESELIN
 5,7-DIHYDROXY-4'-METHOXYFLAVONE
 PL HHB
 5,7-DIHYDROXY-2-METHYL-
 CHROMONE PL PEP
 EO 200-300 SD WIC
 FAT 120,000-180,000 SD WIC
 FLAVONE PL PEP
 FURANOCHROMONE 10,000-40,000 SD
 WIC
 FURANOCOUMARIN PL PEP
 FUROCHROME PL PEP
 FUROCOUMARIN PL PEP
 GLUCOSE PL PEP
 GLUCURONIC-ACID PL PEP
 8-HYDROXY-5-METHOXY-PSORALEN
 PL HHB
 ISOPIMPINELLIN PL PEP
 ISOQUERCETIN PL PEP
 ISOQUERCITRIN FL LF HHB
 ISORHAMNETIN PL HHB
 ISORHAMNETIN-3-SULFATE PL PEP
 KAEMPFEROL PL HHB
 KAEMPFEROL-3-GLYCOSIDE PL PEP
 KAEMPFEROL-3-RUTINOSIDE FL LF
 HHB
 KHELLACTONE SD HHB
 D-KHELLACTONE PL HHB
 L-KHELLACTONE PL HHB
 KHELLACTONE-DIACETATE PL PEP
 KHELLIN 3,000-10,000 SD HHB WIC
 KHELLININ 10,000 SD HHB
 KHELLINOL SD HHB
 KHELLINONE SD HHB
 KHELLOL 300-1,000 SD WIC
 KHELLOL-GLUCOSIDE 3,000 PL RIZ
 KHELLOL-GLYCOSIDE PL PEP
 LACTIC-ACID PL PEP
 LINALOOL EO WIC
 CIS-LINALOOL-OXIDE EO WIC
 TRANS-LINALOOL-OXIDE EO WIC
 MARMEDIN PL HHB
 MERCURIC-ACETATE PL PEP
 2-METHYL-5,8-DIMETHOXY-FURANO-
 (4',5',6,7)-CHROMONE PL PEP
 MYRICETIN FL LF HHB
 MYRICETIN-DIGLYCOSIDE FL LF HHB
 MYRICETIN-MONOGLYCOSIDE FL LF
 HHB
 MYRICETIN-3-RHAMNOSIDE LF FL
 HHB
 MYRICETIN-TRIGLYCOSIDE LF FL HHB
 MYRICETIN-3-XYLOGALACTOSIDE PL
 PEP
 MYRICETIN-
 XYLOGLYCOGLUCURONIDE PL PEP
 MYRICETIN-3-
 XYLOGLYCOGLUCURONIDE PL PEP
 MYRISTIC-ACID PL PEP
 NORKHELLIN PL PEP
 OCTADECADIENOIC-ACID PL PEP
 OCTADECENOIC-ACID PL PEP
 OLEIC-ACID SD RIZ
 PALMITIC-ACID SD RIZ
 PETROSELINIC-ACID PL PEP
 PEUCENIN PL PEP
 PHENYLALANINE PL PEP
 PROTEIN 120,000-180,000 FR HHB
 PYRANOCOUMARIN 2,000-5,000 SD WIC
 ALPHA-PYRONE PL PEP
 GAMMA-PYRONE 10,000-40,000 SD WIC
 QUERCETIN PL HHB
 QUERCETIN-3-GLYCOSIDE PL PEP
 QUERCETIN-3-RUTINOSIDE PL PEP
 RHAMNAZIN PL HHB
 RHAMNETIN PL PEP
 RHAMNOCITRIN PL PEP
 RHAMNOSE PL PEP
 RUTIN LF FL HHB
 RUTINOSE PL PEP
 SAMIDIN SD HHB
 SHIKIMIC-ACID PL PEP
 ALPHA-SPINASTEROL-GLUCOSIDE PL
 HHB

STEARIC-ACID PL PEP
 STIGMASTEROL-GLUCOSIDE PL HHB
 TANNINS PL PEP
 TERPINEN-4-OL EO WIC
 ALPHA-TERPINEOL EO WIC
 VISAMMIDIN SD HHB
 VISAMMINOL SD HHB
 VISNADIN SD HHB
 VISNAGAN PL PEP
 VISNAGANE 2,000-5,000 SD WIC
 VISNAGIN 450-10,000 SD HHB RIZ WIC
 VISNAGININ SD HHB
 VISNAGINONE SD HHB
 VISNAGION PL PEP
 VISNAMMIN PL PEP
 XANTHOTOXIN PL PEP
 XYLOSE PL PEP

AMOMUM XANTHIOIDES WALL.

"BASTARD CARDAMOM;
 MALABAR CARDAMOM; TAVOY
 CARDAMOM; CHIN KOU SHA"

ARSENIC 0.09 SD CAL 1/
 BORNEOL SD CCO
 D-BORNEOL SD CCO
 BORNYL-ACETATE SD CCO
 CALCIUM 5,090 SD CAL
 CAMPHENE SD ABS 2/
 D-CAMPHOR SD CCO
 COPPER 8 SD CAL
 EO 15,000-30,000 SD CCO
 IRON 910 SD CAL
 LINALOOL SD CCO
 MAGNESIUM 3,540 SD CAL
 MANGANESE 565 SD CAL
 MERCURY 0.1 SD CAL
 NEROLIDOL SD CCO
 ALPHA-PINENE SD ABS 2/
 POTASSIUM 28,100 SD CAL
 SODIUM 187 SD CAL
 ZINC 48 SD CAL

1/ CAL mineral data may apply as well to
 other *Amomums* or *Alpinias* (See CCO) 2/
 Chau (1985) in Purselglove et al.

AMORPHOPHALLUS *CAMPANULATUS* BLUME

"ELEPHANT-FOOT YAM"

ALUMINUM 4-18 RT B&H
 ASCORBIC-ACID 15-279 RT B&H CRC

ASH 3,100-66,000 RT B&H CRC
 ASH 163,000 SH CRC
 BORON 1.7-7.7 RT B&H
 CALCIUM 260-5,720 RT B&H
 CALCIUM 15,200 SH CRC
 CALCIUM-OXALATE 3,820-17,200 RT
 B&H
 CARBOHYDRATES 184,000-856,000 RT
 B&H CRC
 CARBOHYDRATES 651,000 SH CRC
 BETA-CAROTENE 0-6.8 RT B&H
 CITRATES 2,560-11,530 RT B&H
 COPPER 1.8-8 RT B&H
 FAT 600-16,000 RT B&H CRC
 FAT 33,000 SH CRC
 FIBER 7,000-65,315 RT B&H CRC
 FIBER 142,000 SH CRC
 IRON 5-112 RT B&H CRC
 KILOCALORIES 771-3,770 RT B&H CRC
 MAGNESIUM 220-3,120 RT B&H
 MALATES 5,130-23,100 RT B&H
 MANGANESE 3-14 FT B&H
 NIACIN 7-79 RT B&H CRC
 OXALATE 2,880-12,975 RT B&H
 PHOSPHORUS 320-3,020 RT B&H
 PHOSPHORUS 8,100 SH CRC
 POTASSIUM 4,160-28,020 RT B&H
 PROTEIN 5,600-198,000 RT B&H CRC
 PROTEIN 153,000 SH CRC
 RIBOFLAVIN 0.2-3.2 RT B&H
 SODIUM 41-233 RT B&H CRC
 STARCH 67,200-747,747 RT B&H
 SUCCINATES 3,390-15,270 RT B&H
 SUGAR 1,400-6,306 RT B&H
 SULFUR 118-530 RT B&H
 THIAMIN 0.5-2.8 RT B&H CRC
 WATER 750,000-894,000 RT B&H
 ZINC 10-50 RT B&H

AMORPHOPHALLUS KONJAC K. KOCH

"GLUCOMANNAN; DEVIL'S
 TONGUE; LEOPARD PALM;
 UMBRELLA ARUM; KONJAC"

ADENINE RT CCO 3/
 ALUMINUM TR RT PED 1/
 ASH 2,000-77,000 LF CRC
 ASH 24,000 RT PED 2/
 CALCIUM 170-6,538 LF CRC
 CALCIUM 234 RT PED
 CARBOHYDRATES 23,000-885,000 LF
 CRC

BETA-CAROTENE TR RT PED 2/
 CHOLINE RT CCO 3/
 CHROMIUM TR RT PED
 COBALT 125 RT PED 2/
 FAT 9,000 RT PED
 FIBER 1,000-38,000 LF CRC
 FIBER 88,000 RT PED 2/
 GLUCOMANNAN RT CCO 3/
 GLUCOSE RT CCO 3/
 IRON 3-115 LF CRC
 IRON TR RT PED
 KILOCALORIES 80-3,080 LF CRC
 KILOCALORIES 2,610 RT PED
 MAGNESIUM TR RT PED
 MANGANESE TR RT PED 2/
 NIACIN TR RT PED 2/
 PHOSPHORUS 70-2,692 LF CRC
 PHOSPHORUS 39 RT PED 2/
 POTASSIUM 1,740 RT PED
 PROTEIN 1,000-38,000 LF CRC
 PROTEIN 39,000 RT PED 2/
 RIBOFLAVIN TR BK PED
 SELENIUM 1.7 RT PED
 SILICON TR RT PED
 SODIUM 130 RT PED
 THIAMIN TR RT PED 2/
 TIN TR RT PED 2/
 TRIGONELLINE RT CCO 3/
 TRIMETHYLAMINE RT CCO 3/
 WATER 974,000 LF CRC
 ZINC TR RT PED 2/

1/PED=Pedersen, M. 1987. 2/Pedersen calls this herb by the chemical name glucomannan; data refer to "purified root"; most minerals got stripped in purification; cobalt is still high. 3/May more properly be ascribed to another species of *Amorphophallus*.

ANABASIS APHYLLA L.

"ANABASIS"

ALKALOIDS 20,000 PL HHB
 ANABASAMINE PL HHB
 DL-ANABASINE PL HHB
 L-ANABASINE PL HHB
 APHYLLIC-ACID PL PEP
 APHYLLIDINE PL HHB
 APHYLLINE PL HHB
 APHYLLINE-METHYL-ETHER PL JSG
 APHYLLINE-N-OXIDE PL RIZ
 APHYLLINIC-ACID PL PEP
 BETA-BIPERIDYL PL PEP

CATALASE PL PEP
 CELLULOSE PL PEP
 CITRIC-ACID PL PEP
 GLUTAMIC-ACID PL PEP
 HEMICELLULOSE PL PEP
 HYDROXYAPHYLLINE PL HHB
 ISOANABASINE PL PEP
 ISOAPHYLLINE PL PEP
 LIGNIN PL PEP
 LUPININE PL HHB
 N-METHYLANABASINE PL ALK
 METHYL-APHYLLATE PL RIZ
 NEONICOTINE PL PEP
 N-OCTACOSANE PL PEP
 OXOAPHYLLIDINE PL HHB
 OXAPHYLLINE PL RIZ
 PACHYCARPINE PL PEP
 PECTIN PL PEP
 PENTOSAN PL PEP
 PHYLLIDINE PL PEP
 PIPERIDINE PL PEP
 PYRIDINE PL PEP
 CIS-QUINOLIZIDINE PL PEP
 TRANS-QUINOLIZIDINE PL PEP
 SALSOLINE PL PEP
 SUPININE PL ALK
 THERMOPSINE PL PEP

ANACARDIUM OCCIDENTALE L.

"CASHEW"

ALANINE 7,020-7,141 SD USA
 ALUMINUM 2.0 SD FUR 1/
 ANACARDIC-ACID SD HHB
 ANACARDOL SD HHB
 ANTIMONY 0.3 SD FUR
 ARABINOSE RE CCO
 ARGININE 17,410-17,711 SD USA
 ARSENIC 0.02 SD FUR
 ASCORBIC-ACID 252-17,500 FR CRC
 ASCORBIC-ACID 890-2,957 LF CRC
 ASCORBIC-ACID 20-21 SD CRC
 ASH 2,000-28,000 FR CRC WOI
 ASH 12,000-40,000 LF CRC
 ASH 26,000-32,000 SD CRC
 ASPARTIC-ACID 15,050-15,310 SD USA
 BARIUM 0.1 SD FUR
 BENZALDEHYDE FR CCO
 BORON 3.2 SD FUR
 BROMINE 1.2 SD FUR
 CADMIUM 0.03 SD FUR
 CALCIUM 100-833 FR CRC WOI
 CALCIUM 240-823 SD CRC USA
 CAPRIC-ACID 1,320-1,343 SD USA

CAPRYLIC-ACID 1,320-1,343 SD USA
 CARBOHYDRATES 116,000-958,678 FR
 WOI
 CARBOHYDRATES 231,000-767,000 LF
 CRC
 CARBOHYDRATES 294,000-432,000 SD
 CRC
 CARDANOL SD HHB
 CARDOL BK 411/
 CAR-3-ENE FR CCO
 BETA-CAROTENE 7.6-53 FR CRC
 BETA-CAROTENE 6-20 LF CRC
 BETA-CAROTENE 0-0.6 SD CRC USA
 ALPHA-CATECHIN SD HHB
 CESIUM 0.1 SD FUR
 CHLORINE 184 SD FUR
 CHROMIUM 0.3 SD FUR
 COBALT 0.1 SD FUR
 COPPER 22-37 SD CRC FUR
 CYSTINE 2,830-2,879 SD USA
 L-EPICATECHIN SD HHB
 EUROPIUM 0.02 SD FUR
 FAT 1,000-49,000 FR CRC WOI
 FAT 6,000-20,000 LF CRC
 FAT 370,000-482,000 SD CRC
 FIBER 6,000-42,000 FR CRC
 FIBER 7,120-15,000 SD CRC USA
 FLUORINE 1.4 SD FUR
 FOLACIN 0.7 SD USA
 GADOLEIC-ACID 1,390-1,414 SD USA
 GALACTOSE RE CCO
 GALLIC-ACID SD HHB
 GINGKOL BK 411/
 GLUCOSE RE CCO
 GLUCURONIC-ACID RE CCO
 GLUTAMIC-ACID 36,240-36,867 SD USA
 GLYCINE 8,030-8,169 SD USA
 GOLD
 HAFNIUM 0.02 SD FUR
 HEXANAL FR CCO
 TRANS-HEX-2-ENAL FR CCO
 HISTIDINE 3,990-4,059 SD USA
 HYDROXYBENZOIC-ACID LF 411/
 IODINE 0.1 SD FUR
 IRON 2-77 FR CRC WOI
 IRON 18-195 SD USA
 ISOLEUCINE 7,310-7,436 SD USA
 KAEMPFEROL-GLYCOSIDE LF 411/
 KILOCALORIES 530-3,680 FR CRC
 KILOCALORIES 1,000-3,320 LF CRC
 KILOCALORIES 5,330-5,920 SD CRC
 USA
 LANTHANUM 0.02 SD FUR
 LAURIC-ACID 7,840-7,975 SD USA
 LEAD 0.3 SD FUR
 LEUCINE 12,850-13,072 SD USA
 LEUCOCYANIDIN FR HHB
 LEUCOPELARGONIDINE FR HHB
 LIMONENE FR CCO
 LINOLEIC-ACID 76,600-77,925 SD USA
 ALPHA-LINOLENIC-ACID 1,610-1,638
 SD USA
 LUTETIUM 0.01 SD FUR
 LYSINE 8,170-8,311 SD USA
 MAGNESIUM 260-1,886 SD FUR USA
 MANGANESE 8.4 SD FUR
 MANNOSE RE CCO
 MERCURY 0.01 SD FUR
 METHIONINE 2,740-2,787 SD USA
 4-O-METHYLGLUCURONIC-ACID RE
 CCO
 MOLYBDENUM 0.1 SD FUR
 MUFA 273,170-277,894 SD USA
 MYRISTIC-ACID 3,470-3,530 SD USA
 NARINGENIN SD CCO
 NICAIN 3-21 FR CRC
 NIACIN 14-46 LF CRC
 NIACIN 18-22 SD USA
 NICKEL 5.0 SD FUR
 OLEIC-ACID 268,080-296,000 SD HHB
 USA
 OXALIC-ACID 3,184 SD WBB
 PALMITIC-ACID 43,510-44,262 SD USA
 PALMITOLEIC-ACID 3,180-3,235 SD
 USA
 PANTOTHENIC-ACID 12-13 SD USA
 PHENYLALANINE 7,910-8,046 SD USA
 PHOSPHORUS 100-3,125 FR CRC WOI
 PHOSPHORUS 3,730-6,255 SD CRC
 PHYTOSTEROLS 1,580-1,607 SD USA
 POTASSIUM 4,600-6,815 SD USA
 PROLINE 6,900-7,019 SD USA
 PROTEIN 2,000-69,000 FR CRC WOI
 PROTEIN 52,000-173,000 LF CRC
 PROTEIN 152,000-188,000 SD CRC USA
 PRUNIN-6'-O-P-COUMARATE SD CCO
 PUFA 78,360-79,715 SD USA
 QUERCETIN-GLYCOSIDE LF 411/
 RHAMNOSE RE CCO
 RIBOFLAVIN 2.4-16.7 FR CRC
 RIBOFLAVIN 0.1-0.3 LF CRC
 RIBOFLAVIN 2-3.3 SD USA
 RUBIDIUM 35 SD FUR
 SALICYLIC-ACID FR 411/
 SAMARIUM 0.03 SD FUR
 SCANDIUM 0.002 SD FUR
 SELENIUM 0.2 SD FUR
 SERINE 8,490-8,637 SD USA

SFA 91,570-93,154 SD USA
 SILICON 1,280 SD FUR
 BETA-SITOSTEROL SD HHB
 SODIUM 150-257 SD CRC FUR (NUTS
 SALTED)
 SQUALENE SD HHB
 STEARIC-ACID 29,720-102,000 SD HHB
 USA
 STRONTIUM 4.2 SD FUR
 SULFUR 4,800 SD FUR
 TANNIN 90,000 BK WOI
 TANTALUM 0.02 SD FUR
 THIAMIN 0.3-2.1 FR CRC
 THIAMIN 0.1-0.3 LF CRC
 THIAMIN 2-8.7 SD USA
 THORIUM 0.2 SD FUR
 THREONINE 5,920-6,022 SD USA
 TIN 0.9 SD FUR
 TITANIUM 2.4 SD FUR
 TRYPTOPHAN 2,370-2,411 SD USA
 TUNGSTEN 0.1 SD FUR
 TYROSINE 4,910-4,995 SD USA
 URONIC-ANHYDRIDE 57,000-62,000 RE
 CCO
 VALINE 10,400-10,580 SD USA
 VANADIUM 0.02 SD FUR
 VIT-B6 2-3 SD USA
 WATER 856,000-879,000 FR CRC WOI
 WATER 699,000 LF CRC
 WATER 79,000-95,000 RE CCO
 WATER 27,000-52,000 SD CRC
 XYLOSE (2% GUM) CCO
 YTTERBIUM 0.02 SD FUR
 ZINC 48-57 SD CRC FUR 1/

1/ Fur=A.K.Furr et al, 1979.

ANADENANTHERA COLUBRINA
 (VELL.) BRENNAN.

“COHOBA”
 “NIOPO”

BUFOTENINE SD CRC
 N,N-DIMETHYLTRYPTAMINE SD CRC
 TRYPTAMINES SD CRC

ANADENANTHERA PEREGRINA
 (L.) SPEG.

“COHOBA”
 “NIOPO”

BUFOTENINE PL CRC
 BUFOTENINE-OXIDE FR ALK

CATECHOL PL CRC
 N,N-DIMETHYLTRYPTAMINE FR ALK
 N,N-DIMETHYLTRYPTAMINE-OXIDE
 FR ALK
 HOMOORIENTINE LF CRC
 LEUCOANTHOCYANIN PL CRC
 LEUCOPELARGONIDOL PL CRC
 5-METHOXY-N,N-
 DIMETHYLTRYPTAMINE BK ALK
 5-METHOXY-N-METHYLTRYPTAMINE
 BK ALK
 N-METHYLTRYPTAMINE BK ALK
 ORIENTIN LF CRC
 SAPONARETIN LF CRC
 1,2,3,4-TETRAHYDRO-6-METHOXY-2,9-
 DIMETHYL-BETA-CARBOLINE PL JSG
 1,2,3,4-TETRAHYDRO-6-METHOXY-2-
 METHYL-BETA-CARBOLINE PL JSG
 VITERINE LF CRC

ANAMIRTA COCCULUS
 WIGHT & ARN.

“LEVANT BERRY”

ACETIC-ACID FR HHB
 ANAMIRTIN SD JFM
 BUTYRIC-ACID FR HHB
 COCCULIN SD JFM
 FAT 110,000-180,000 FR HHB
 FORMIC-ACID FR HHB
 LINOLEIC-ACID 3,432-5,616 SD JFM
 MENISPERMINE FR HHB
 8-OXOTETRAHYDROPALMATINE PL
 JSG
 OLEIC-ACID FR HHB
 PALMITIC-ACID 6,710-10,980 SD JFM
 PARAMENISPERMINE FR HHB
 PHYTOSTEROLS FR HHB
 PICROTIN FR HHB
 PICROTOXIN 6,000-50,000 FR HHB 411/
 PICROTOXININ FR HHB
 SITOSTEROL SD JFM
 STEARIC-ACID 52,250-85,500 SD JFM
 SUCROSE FR HHB
 WAX FR HHB

ANANAS COMOSUS (L.) MERR.

“PINEAPPLE”

ACETALDEHYDE 0.61-1.4 FR HUL
 ACETIC-ACID 0.49 FR HUL
 ACETONE FR HUL
 ACETOXYACETONE FR HUL

ACRYLIC-ACID CRC
 ALANINE 170-1,259 FR USA
 P-AMINO BENZOIC-ACID 0-1 FR HUL
 GAMMA-AMINO-BUTYRIC-ACID 124
 FR HUL
 AMYL-CAPROATE FR HUL
 ANANASIC-ACID PL JSG
 ARGININE 46-1,333 FR HUL USA
 ASCORBIC-ACID 148-4,178 FR CRC WOI
 USA
 ASH 2,800-36,000 FR CRC PED USA
 ASPARAGINE 1,251 FR HUL
 ASPARTIC-ACID 293-4,222 FR HUL USA
 BIACETYL FR HUL
 BORON 0.2 FR BOB
 BROMELAIN FR MAR
 BROMELIN FR HUL
 BUTYL-FORMATE FR HUL
 GAMMA-BUTYROLACTONE FR HUL
 CALCIUM 62-1,308 FR CRC USA WOI
 GAMMA-CAPROLACTONE 0.12 FR HUL
 CARBOHYDRATES 116,000-938,000 FR
 CRC WOI
 BETA-CAROTENE 0-3 FR CRC PED
 CELLULOSE 4,300-5,400 FR HUL
 CHAVICOL 0.27 FR HUL
 CHLORINE 460 FR HUL
 CITRIC-ACID 3,200-86,000 FR CRC
 HUL
 COPPER 1-8.8 FR USA
 P-COUMARIC-ACID 330-730 PL HUL
 CYSTINE 20-148 FR HUL USA
 2,5-DIMETHYL-4-HYDROXY-3(2H)-
 FURANONE 1.2 PL HUL
 DIMETHYL-MALONATE 0.06 FR HUL
 ERGOSTEROL-PEROXIDE PL JSG
 ESTERS 1-250 FR HUL
 ETHYL-ACETATE 3-120 FR HUL
 ETHYL-BETA-ACETOXYHEXANOATE
 0.006 FR HUL
 ETHYL-ACRYLATE 0.77 FR HUL
 ETHYL-ALCOHOL 60 FR HUL
 ETHYL-BUTYRATE FR HUL
 ETHYL-CAPROATE 0.77 FR HUL
 ETHYL-CAPRYLATE FR HUL
 ETHYL-FORMATE FR HUL
 ETHYL-BETA-HYDROXYHEXANOATE
 0.03 FR HUL
 ETHYL-ISOBUTYRATE FR HUL
 ETHYL-ISOVALERATE 0.39 FR HUL
 ETHYL-LACTATE FR HUL
 ETHYL-BETA-
 METHYLTHIOPROPIONATE 0.09 FR
 HUL
 ETHYL-PROPIONATE FR HUL
 FAT 1,000-42,772 FR CRC PED USA WOI
 FERULIC-ACID 200-760 PL HUL
 FIBER 3,000-45,000 FR CRC PED
 FRUCTOSE 6,000-23,000 FR HUL
 GLUCOSE 10,000-32,000 FR HUL
 GLUTAMIC-ACID 90-3,333 FR HUL USA
 GLUTAMINE 256 FR HUL
 GLYCINE 65-1,259 FR HUL USA
 HEXOSANS 1,000-1,500 FR HUL
 HISTIDINE 48-667 FR HUL USA
 5-HYDROXYTRYPTAMINE CRC
 INDOLE-ACETIC-ACID-OXIDASE FR
 HUL
 IODINE 0-1 FR
 IRON 3-73 FR CRC PED WOI
 ISOBUTANOL FR HUL
 ISOBUTYL-ACETATE FR HUL
 ISOBUTYL-FORMATE FR HUL
 ISOCAPRONIC-ACID FR CRC
 ISOLEUCINE 23-963 FR HUL USA
 ISOPROPYL-ISOBUTYRATE FR HUL
 LEUCINE 24-1,407 FR HUL USA
 LINOLEIC-ACID 840-6222 FR USA
 ALPHA-LINOLENIC-ACID 620-4,592 FR
 USA
 LYSINE 46-1,852 FR HUL USA
 MAGNESIUM 110-1,075 FR HUL USA
 L-MALIC-ACID FR CRC
 MALIC-ACID 1,000-4,700 FR HUL
 MANGANESE 12-209 FR USA
 METHANOL FR HUL
 METHIONINE 110-815 FR USA
 METHYL-ACETATE FR HUL
 METHYL-BETA-ACETOXYHEXANOATE
 0.03 FR HUL
 METHYL-BUTYRATE FR HUL
 METHYL-CAPROATE FR HUL
 METHYL-CAPRYLATE 0.75 FR HUL
 METHYL-BETA-HYDROXYBUTYRATE
 0.006 FR HUL
 METHYL-BETA-HYDROXYHEXANOATE
 0.021 FR HUL
 METHYL-ISOBUTYRATE FR HUL
 METHYL-ISOCAPROATE 1.4 FR HUL
 METHYL-ISOVALERATE 0.6 FR HUL
 METHYL-BETA-
 METHYLTHIOPROPIONATE 0.12-1.1
 FR HUL
 METHYL-CIS-(4?)-OCTENOATE 0.0009
 FR HUL
 METHYL-N-PROPYL-KETONE FR CRC
 BETA-METHYL-THIOPROPIONIC-ACID-
 ETHYL-ESTER CRC

BETA-METHYL-THIOPROPIONIC-ACID-METHYL-ESTER CRC
 MUFA 480-3,556 FR USA
 NIACIN 2-33 FR CRC USA
 NITRATE 0-1,200 FR HUL
 NITROGEN 450-1,150 FR HUL
 GAMMA-OCTALACTONE 0.3 FR HUL
 DELTA-OCTALACTONE 0.3 FR HUL
 OLEIC-ACID 450-3,333 FR USA
 OXALIC-ACID 50-58 FR HUL WBB
 PALMITIC-ACID 190-1,407 FR USA
 PALMITOLEIC-ACID 30-220 FR USA
 PANTOTHENIC-ACID 1-11 FR HUL USA
 PECTIN 600-1,600 FR HUL
 PENTANOL FR HUL
 PENTOSANS 3,300-4,300 FR HUL
 PEROXIDASE FR HUL
 PHENYLALANINE 40-889 FR HUL USA
 PHOSPHATASE FR HUL
 PHOSPHORUS 60-923 FR CRC WOI HUL
 PHYTOSTEROLS 60-444 FR USA
 POTASSIUM 110-9,932 (-18,200) FR CRC (PED)
 PROLINE 31-963 FR HUL USA
 PROPANOL FR HUL
 PROPYL-ACETATE FR HUL
 PROPYL-FORMATE FR HUL
 PROTEIN 4,000-55,000 FR CRC PED WOI
 PUFA 1,460-10,815 FR USA
 RIBOFLAVIN 0-3 FR CRC
 SERINE 250-1,852 FR USA
 SEROTONIN 19-60 FR HUL
 SFA 320-2,370 FR USA
 SILICON 110-690 FR HUL
 SODIUM 10-180 FR CRC PED
 STARCH 19 FR HUL
 STEARIC-ACID 110-815 FR USA
 STIGMAST-5-ENE-3BETA,7ALPHA-DIOL PL JSG
 SUCROSE 59,000-150,000 FR CRC
 SULFUR 70 FR HUL
 TRANS-TETRAHYDRO-ALPHA-ALPHA-5-TRIMETHYL-5-VINYLFURFURYL-ALC
 THIAMIN 0-7 FR CRC USA
 THREONINE 78-859 FR HUL USA
 ALPHA-TOCOPHEROL 1-7 FR USA
 TYROSINE 58-889 FR HUL USA
 N-VALERIANIC-ACID FR HUL
 VALINE 39-1,185 FR HUL USA
 VANILLIN FR CRC
 VIT-B6 0.9-6 FR USA
 WATER 812,000-890,000 FR PED WOI
 ZINC 0.7-6 FR USA

ANAPHALIS MARGARITACEA (L.)
 A. GRAY

“PEARLY EVERLASTING”

5-CHLOR-2-[OCTATRIIN-(2,4,6)-YLIDEN]-5,6-DIHYDRO-2H-PYRAN
 TRANS-DEHYDROMATRICARIAESTER
 RT HHB
 EO PL CRC
 PHYTOSTEROL PL CRC
 RESIN PL CRC
 TANNIN PL CRC
 TRIDECAPENTAIN-EN RT HHB

ANASTATICAHIEROCHUNTICAL.

“JERICHO ROSE”

ALANINE FR RIZ
 ARGININE FR RIZ
 ASPARTIC-ACID FR RIZ
 CHOLESTEROL PL RIZ
 CHOLINE PL RIZ
 FLAVONOIDS 2,630 PL RIZ
 FRUCTOSE FR RIZ
 GALACTOSE FR RIZ
 GLUCOIBERIN FR RIZ
 GLUCOCHEIRONIN PL RIZ
 GLUCOSE FR RIZ
 KAEMPFEROL-7-GLUCOSIDE PL RIZ
 KAEMPFEROL-3-RHAMNOGLUCOSIDE PL RIZ
 LUTEOLIN-7-GLUCOSIDE PL RIZ
 METHIONINE PL RIZ
 PHENYLALANINE PL RIZ
 PROLINE PL RIZ
 QUERCETIN PL RIZ
 RAFFINOSE FR RIZ
 RUTIN PL RIZ
 BETA-SITOSTEROL PL RIZ
 STACHYOSE FR RIZ
 STIGMASTEROL PL RIZ
 SUCROSE FR RIZ
 THREONINE PL RIZ

ANDIRA ARAROA AGUIAR

“ARAROA”

ARAROBINOL WD HHB
 CHRYSAROBIN WD HHB
 CHRYSOPHANIC-ACID WD CRC
 CHRYSOPHANOL WD HHB
 CHRYSOPHANOLANTHRONE WD HHB

DIHYDROEMODINANTHRANOLMONO-
METHYLETHER WD HHB
EMODINANTRONMONOMETHYLETHER
WD HHB
EMODINMONOMETHYLETHER WD
HHB

ANDIRA INERMIS HBK

“CABBAGE BARK”

ANDIRINE BK HHB
BERBERINE BK HHB
DEMETHYOPTEROCARPIN PL JSG
FAT BK HHB
GEOFFROYINE PL JSG
INERMIN BK 411/
N-METHYLTYROSINE BK 411/
PTEROCARPANS BK 411/
RESIN BK HHB
STARCH BK HHB

ANDROGRAPHIS PANICULATA
(BURM.f) NEES

“CREAT”

ANDROGRAPHINE RT HHB
ANDROGRAPHOLIDE PL HHB
14-DEOXY-11-
DEHYDROANDROGRAPHOLIDE PL
CCO
14-DEOXY-11-OXOANDROGRAPHOLIDE
PL CCO
5-HYDROXY-7,8,2',3'-
TETRAMETHOXYFLAVONE PL HHB
5-HYDROXY-7,8,2'-
TRIMETHOXYFLAVONE TC CCO
NEOANDROGRAPHOLIDE PL CCO
PANICOLINE RT HHB
PANICULIDE-A PL CCO
PANICULIDE-B PL CCO
PANICULIDE-C PL CCO

ANEMARRHENA

ASPHODELOIDES BUNGE

“CHIH-MU; ZHI-MU”

ANEMARANS RH IJO16:19
ARSENIC 0.14 RH CAL
ASPHOGENIN RH IJO16:19
ASPHONIN 6,000 RH IJO16:19
CALCIUM 10,900-11,600 RH CAL SMO
CHIMONIN RH IJO16:19
COPPER 5-9 RH CAL SMO

IRON 90-1,400 RH CAL SMO
ISOMANGIFERIN PL CCO
MAGNESIUM 1,130-1,200 RH CAL SMO
MANGANESE 10-40 RH CAL SMO
MANGIFERIN 1,200-12,600 RH IJO16:20
MARKOGENIN RH IJO16:19
MARKOGENIN-3-O-TIMOBIOSE RH
CCO
NEOGITOGENIN RH CCO
NICOTINAMIDE RH IJO16:20
NICOTINIC-ACID RH CCO
PANTOTHENIC-ACID RH CCO
POTASSIUM 5,360-10,100 RH CAL SMO
PROTocatechuic-ACID RH CCO
SAPONINS 60,000 RH CCO
SARSASAPOGENIN RH IJO16:19
SARSASAPOGENIN-3-O-BETA-GALAC-
TOSIDE RH CCO
SARSASAPOGENIN-3-O-BETA-GLU-
COSIDE RH CCO
SARSASAPOGENIN-3-O-BETA-
SOPHOROSIDE RH CCO
SARSASAPOGENIN-3-O-BETA-
TIMOBIOSE RH CCO
SODIUM 52-289 RH CAL SMO
TIMOSAPONIN-A-I RH CCO
TIMOSAPONIN-A-II RH CCO
TIMOSAPONIN-A-III RH CCO
TIMOSAPONIN-A-IV RH CCO
TIMOSAPONIN-B-I RH CCO
TIMOSAPONIN-B-II RH CCO
XANTHONE 13,000 RH CCO
ZINC 19-27 RH CAL SMO

ANEMONE CORONARIA L.

“FRENCH ANEMONE”

ASH 41,000-45,000 SD CRC
FAT 207,000-266,000 SD CRC
PROTEIN 256,000-260,000 SD CRC

ANEMONE PULSATILLA L.

“PASQUE FLOWER”

ANEMONIN PL CCO
DELPHINIDIN-GLYCOSIDE PL CRC
GLUCOSE PL CRC
PELARGONIDIN-GLYCOSIDE PL CRC
PROTOANEMONIN PL CCO
RANUNCULIN PL 411/
RESIN PL CRC
SAPONIN 1,900-7,500 RT CRC
TANNIN PL CRC

ANETHUM GRAVEOLENS L.**"DILL"**

- AESCULETIN FR HHB
 ALUMINUM 4-210 PL AAS
 ANETHOLE PL PEP
 TRANS-ANETHOLE 12-539 FR BML
 ANISIC-ALDEHYDE PL RIZK
 APIOLE RT RIZK
 ARGINASE PL PEP
 ARGININE 12,630-13,678 FR USA
 ARSENIC 0.01-0.06 PL AAS
 ASCORBIC-ACID 1,440 PL RIZK
 ASH 64,000-84,000 FR CRC USA
 ASH 26,000-205,880 PL AASCRC
 USA
 BENZYL-ETHER PL RIZK
 BERGAPTEN FR HHB
 BORON 4-35 PL AAS BOB
 BORON 28-50 SD BOB
 BROMINE 1-6 PL AAS
 BUTYLPHTHALIDE RT 411/
 CADMIUM 0.02-1 PL AAS
 CAFFEIC-ACID FR HHB
 CALCIUM 14,003-17,671 FR CRC USA
 CALCIUM 1,900-21,453 PL AAS CRC
 USA
 CAMPHENE PL RIZK
 CAMPHOR RT RIZK
 CARBOHYDRATES 551,700-597,491 FR
 CRC USA
 CARBOHYDRATES 558,200-602,000 PL
 CRC USA
 CAROTENOIDS 465 LF RIZK
 CARVACROL PL PEP
 BETA-CARYOPHYLLENE PL RIZK
 CIS-CARVEOL FR BML
 TRANS-CARVEOL 42-270 FR BML
 CARVONE PL RIZK
 D-(+)-CARVONE 5,196-37,653 FR
 BML
 CARVOTANACETONE FR BML
 CHLOROGENIC-ACID FR HHB
 CHROMIUM 0.01-0.29 PL AAS
 CINEOLE PL RIZK
 1,5-CINEOLE PL PEP
 COBALT 0.002-0.29 PL AAS
 COPPER 8 FR USA
 COPPER 1.7-17 PL AAS USA
 P-CYME NE 336-3,773 FR BML
 DECANAL 24-154 FR BML
 DIHYDROCARVEOL PL PEP
 D-(+)-DIHYDROCARVONE 168-1,925 FR
 BML
 CIS-DIHYDROCARVONE 36-12,782 FR
 BML
 TRANS-DIHYDROCARVONE 24-154 FR
 BML
 6,7-DIHYDRO-8,8-DIMETHYL-2H,8H-
 BENZO-(1,2B:5,4')-DIPYRAN-2,6-DIONE
 PL JSG
 DILLANOSIDE PL JSG
 DILLAPIOLE 1,440-40,425 FR BML MPI
 3,6-DIMETHYLCOUMARAN PL PEP
 3,6-DIMETHYL-2,3,4,5,8,9-
 HEXAHYDROBENZOFURAN PL PEP
 4-ALPHA-DIMETHYLSTYRENE RT
 RIZK
 3,6-DIMETHYL-3A,4,5,7A-
 TETRAHYDROCUMARAN FR BML
 3,7-DIMETHYL-4,5,6,9-
 TETRAHYDROCUMARAN FR BML
 DIPENTENE PL PEP
 EICOSANE RT RIZK
 BETA-ELEMENE 12-77 FR BML
 ELEMICIN PL RIZK
 EO 12,000-77,000 FR AYL BML GEO
 HHB
 EO 300-500 RT RIZK
 EO 5,600-15,000 PL AYL GEO HHB
 ESCULETIN FR 411/
 EUGENOL PL RIZK
 FAT 68,000-180,200 FR CRC USA
 FAT 43,000-47,000 PL CRC USA
 FERULIC-ACID FR HHB
 FIBER 177,230-264,869 FR CRC USA
 FIBER 119,300-128,000 LF CRC USA
 FLAVONE PL PEP
 FLUORINE 0.1-5.3 PL AAS
 FURFURAL PL RIZK
 GERANIOL 24-154 FR BML
 HEXADECANE RT RIZK
 HISTIDINE 3,200-3,466 FR USA
 IRON 114-230 FR CRC USA
 IRON 23-755 PL AAS CRC USA
 ISOEUGENOL PL PEP
 ISOLEUCINE 7,670-8,307 FR USA
 ISORHAMNETIN PL PEP
 ISORHAMNETIN-3-GLUCURONIDE PL
 PEP
 KAEMPFEROL FR 411/
 KAEMPFEROL-3-GLUCURONIDE LF
 RIZK
 LAURIC-ACID 100-108 FR USA
 LEAD 0.05-0.8 PL AAS

LEUCINE 9,250-10,018 FR USA
 Z-LIGUSTILIDE RT 411/
 LIMONENE PL PEP
 D-(+)-LIMONENE 3,972-31,416 FR BML
 LINALOOL PL PEP
 LINOLEIC-ACID 9,600-10,397 FR USA
 ALPHA-LINOLENIC-ACID 1,500-1,624
 FR USA
 LUTEOLIN-7-GLUCOSIDE PL PEP
 LYSINE 10,380-11,242 FR USA
 MAGNESIUM 2,449-2,893 FR USA
 MAGNESIUM 560-6,470 PL AAS USA
 MANGANESE 18 FR USA
 MANGANESE 8-435 PL AAS USA
 MERCURY 0.003-0.06 PL AAS
 METHIONINE 1,430-1,549 FR USA
 METHYL-BENZOATE PL PEP
 METHYL-CHAVICOL FR BML
 1-METHYL-4-ISOPROPENYL BENZENE
 FR BML
 MOLYBDENUM <0.1 PL AAS
 MYRCENE 84-924 FR BML
 BETA-MYRCENE PL PEP
 MYRISTIC-ACID 100-108 FR USA
 MYRISTICIN FR RT HHB RIZK
 NEOCNIDOLIDE RT 411/
 NIACIN 28-30 FR BML
 NIACIN 28-30 PL BML
 NICKEL 0.1-4.7 PL AAS
 NITROGEN 6,800-55,300 PL AAS
 NONADECANE RT RIZK
 NONANAL FR BML
 2-NONANOL PL RIZK
 6-OCTADECENOIC-ACID PL PEP
 DELTA-5,6-OCTADECENOIC-ACID PL
 PEP
 7-OCTADECENOIC-ACID PL PEP
 OCTANOL RT RIZK
 OLEIC-ACID 93,600-101,369 FR USA
 PALMITIC-ACID 5,800-6,281 FR USA
 PALMITOLEIC-ACID 500-542 FR USA
 PARAFFIN PL PEP
 PENTADECANE RT RIZK
 PETROSELINIC-ACID-TRIGLYCERIDE
 PL PEP
 D-ALPHA-PHELLANDRENE 516-7,469
 FR BML
 BETA-PHELLANDRENE 168-1,925 FR
 BML RT RIZK
 PHENYLALANINE 6,700-7,256 FR USA
 PHOSPHORUS 2,102-3,723 FR USA
 PHOSPHORUS 600-7,625 PL AAS USA
 ALPHA-PINENE 24-1,001 FR BML

BETA-PINENE PL PEP
 GAMMA-PINENE PL PEP
 POTASSIUM 10,680-14,122 FR USA
 POTASSIUM 8,700-76,450 PL AAS USA
 PROTEIN 147,680-226,000 FR CRC USA
 PROTEIN 199,600-216,000 PL CRC USA
 QUERCETIN PL PEP
 QUERCETIN-3-GLUCURONIDE LF RIZ
 QUERCETIN-3-RUTINOSIDE PL PEP
 QUERCITRIN PL PEP
 RIBOFLAVIN 3 FR USA
 RIBOFLAVIN 3 PL USA
 RUBIDIUM 1.1-28 PL AAS
 SABINENE PL RIZ
 SAFROLE PL RIZ
 SALICALDEHYDE PL RIZ
 SCOPOLETIN FR HHB
 SELENIUM 0.001-0.012 PL AAS
 SENKYUNOLIDE RT 411/
 SILICON 30-700 PL AAS
 BETA-SITOSTEROL PL PEP
 BETA-SITOSTEROL-GLUCOSIDE PL
 PEP
 GAMMA-SITOSTEROL FR HHB
 BETA-SITOSTEROL-GLYCOSIDE FR
 MPI
 SODIUM 158-262 FR USA
 SODIUM 1,097-3,308 PL USA
 STEARIC-ACID 1,000-1,083 FR USA
 STIGMASTEROL TI RIZ
 SULFUR 1,400-11,175 PL AAS
 TANNINS PL PEP
 1,4-TERPINENOL PL RIZK
 TERPINEN-4-OL 12-77 FR BML
 GAMMA-TERPINENE 12-77 FR BML
 ALPHA-TERPINEOL PL RIZK
 BETA-TERPINEOL FR BML PL RIZK
 TETRADECANE RT RIZK
 TETRAHYDROCOUMARANE PL PEP
 THIAMIN 4-5 FR USA
 THIAMIN 4-5 PL USA
 THREONINE 5,750-6,227 FR USA
 ALPHA-THUJENE 36-231 FR BML
 ALPHA-TOCOPHEROL 16-147 LF TOT
 TRIDECENE RT RIZK
 ALPHA,ALPHA-BETA-
 TRIMETHYLBENZYL-ALCOHOL RT
 RIZK
 UMBELLIFERONE FR HHB
 UMBELLIPRENIN FR HHB
 UREASE PL PEP
 VALINE 11,200-12,130 FR USA
 VICENIN FR HHB

XANTHOPHYLL FR HHB
 WATER 73,000-830,000 PL AAS USA
 WATER 70,310-83,690 FR USA
 ZINC 43-66 FR USA
 ZINC 11-150 PL AAS USA

AAS=ACTA AGRIC SCAND SUPPL
 22:1980 H2O=83%; ZMB=5.88 X APB

ANGELICA ARCHANGELICA L.

"GARDEN ANGELICA"

ACONTIC-ACID PL PEP
 ADENOSINE RT PEP
 ALPHA-ALKYL-FUROCOUMARIN PL PEP
 ALPHA-AMYRIN PL JSG
 BETA-AMYRIN-ACETATE PL PEP
 ANGALCIN PL PEP
 ANGELIC-ACID PL PEP
 ANGELICAIN PL PEP
 ANGELICIN RT SD WOI
 APTERIN RT PEP
 ARACHIDIC-ACID PL PEP
 ARCHANGELICAIN PL PEP
 ARCHANGELICIN PL PEP
 ARCHANGELENONE PL PEP
 BEHENIC-ACID PL PEP
 BERGAPTEN 10 SD WOI
 BISABOLANGELONE PL PEP
 BETA-BISABOLENE 25-72 RT BML
 ALPHA-BISABOLOL PL PEP
 BORNEOL TR RT PEP
 BORNYL-ACETATE 25-75 RT BML
 BORNYL-ISOVALERATE 2-7 RT BML
 DELTA-CADINENE 35-101 RT BML
 GAMMA-CADINENE PL PEP
 CAFFEIC-ACID PL PEP
 CAMPESELOL PL PEP
 CAMPESENIN PL PEP
 CAMPESIN PL PEP
 CAMPHENE 45-130 RT BML
 DELTA-3-CARENE 505 RT
 TRANS-CARVEOL 4-11 RT BML
 CIS-CARVYL-ACETATE 2 RT
 TRANS-CARVYL-ACETATE 2-5 RT BML
 CARYOPHYLLENE 8-20 RT BML
 CHLOROGENIC-ACID PL PEP
 CONIFERIN RT PEP
 ALPHA-COPAENE 65-190 RT BML
 BETA-COPAENE 8-20 RT BML
 CIS-ALPHA-COPAENE-8-OL PL JSG
 ALPHA-COPAEN-11-OL 15-45 RT BML
 CRYPTONE 16-50 RT BML

CUMINY-ALCOHOL TR-2 RT BML
 CUPARENE 3-10 RT BML
 AR-CURCUMENE 2-6 RT BML
 O-CYMENE PL PEP
 P-CYMENE 330-980 RT BML
 BETA-CYMOL PL PEP
 CYMEN-8-OL 6-18 RT BML
 M-CYMEN-8-OL 9 RT
 P-CYMEN-8-OL 12-31 RT BML
 2-DECANONE TR RT BML
 DEHYDROASCORBIC-ACID PL PEP
 DEHYDRODEOXYANGELICAN PL PEP
 DELTOIN PL PEP
 DIACETYL RT PEP
 1,1-DIETHOXYHEXANE TR RT
 1,1-DIETHOXYOCTANE TR RT
 DIHYDROCARVONE PL PEP
 DIHYDROFURANOCOUMARIN PL PEP
 DIHYDROFUROCOUMARIN-GLYCOSIDE PL PEP
 5,7-DIHYDROXY-2-METHYLCHROMONE PL PEP
 EICOSENOIC-ACID PL PEP
 BETA-ELEMENE 30-90 RT BML
 ELEMOL 6-18 RT BML
 EO 3,500-10,000 RT WOI
 EO 6,000-15,000 SD GEO WOI
 ERGOSTEROL PL PEP
 ETHANOL RT
 CIS-1-ETHOXY-2-P-MENTHENE 16 RT
 TRANS-3-ETHOXY-1-P-MENTHANE 4 RT
 TRANS-1-ETHOXY-2-P-MENTHENE 6 RT
 4-ETHOXY-1-P-MENTHENE 3 RT
 CIS-3-ETHOXY-1-P-MENTHENE 8 RT
 CIS-4-ETHOXY-2-PINENE 5 RT
 TRANS-4-ETHOXY-2-PINENE 79 RT
 TRANS-4-ETHOXY-THUJANE 10 RT
 CIS-4-ETHOXY-THUJANE 6 RT
 ETHYL-CAPRATE TR RT
 ETHYL-LAURATE TR RT
 ETHYL-LINOLEATE 8 RT
 ETHYL-LINOLENATE TR RT
 ETHYL-MYRISTATE TR RT
 ETHYL-OLEATE TR RT
 ETHYL-PALMITATE 10 RT
 ETHYL-PENTADECANOATE TR RT
 ETHYL-STEARATE TR RT
 BETA-EUDESMOL 7-21 RT BML
 BETA-FARNESENE 5-15 RT BML
 FAT 189,000-203,000 SD
 FENCHONE PL PEP
 FRUCTOSE PL PEP

FUMARIC-ACID PL PEP
 FURANCHROMONE PL PEP
 FURANOCOUMARIN PL PEP
 FURFURAL RT PEP
 GERMACRENE-D 9-26 RT BML
 1-O-BETA-D-GLUCOPYRANOSYL-
 (2S,3P)-3-HYDROXY-MARMESINE PL
 PEP
 2'-BETA-D-GLUCOPYRANOSYLOXY-
 MARMESINE
 PL PEP
 SEC-O-BETA-D-GLUCOPYRANOSYL-(R)-
 BYAKANGELICIN PL PEP
 TERT-O-BETA-D-GLUCOPYRANOSYL-
 (R)-BYAKANGELICIN PL PEP
 TERT-O-BETA-D-GLUCOPYRANOSYL-
 (R)-ISOBYAKANGELICIN PL PEP
 TERT-O-BETA-D-GLUCOPYRANOSYL-
 (R)-HERACLENOL PL PEP
 GLUCOSE PL PEP
 HEPTADECANOLIDE TR RT BML
 HEPTYL-ISOVALERATE TR RT BML
 HEXYL-METHYL-PHTHALATE 3,600 SD
 ALPHA-HUMULENE 18-50 RT BML
 HUMULENE-MONOXIDE 13-40 RT BML
 8-HYDROXY-5-METHOXYPYSORALEN
 PL JSG
 HYDROXYMYRISTIC-ACID SD
 HYDROXPENTADECANOIC-ACID PL
 PEP
 15-HYDROXPENTADECANOIC-ACID
 RT
 IMPERATORIN 50 SD
 ISELIN PL PEP
 ISOAMYL-ISOVALERATE TR-2 RT BML
 ISOBERGAPTIN PL PEP
 ISOBERGAPTOL PL PEP
 ISOCOUMARIN PL PEP
 ISOIMPERATORIN PL PEP
 ISOPIMPINELLIN PL PEP
 KVANNIN PL PEP
 LIGUSTILIDE PL PEP
 LIMONENE 440-1,320 RT BML
 LINALOOL TR-1 RT BML
 LUPEOL-ACETATE PL PEP
 MALIC-ACID PL PEP
 MARMESIN PL PEP
 MARMESININE
 MARMEZIN PL PEP
 TRANS-1(7),5-P-MENTHADIEN-2-YL-
 ACETATE PL JSG
 CIS-P-MENTH-2-EN-1-OL 20-62 RT BML
 TRANS-P-MENTH-2-EN-1-OL 8-24 RT
 BML
 METHANOL RT
 5-METHOXYPYSORALEN PL PEP
 5-METHOXY-GAMMA-
 HYDROXPYSORALEN PL PEP
 8-METHOXYPYSORALEN
 5-METHYL-ANGELICIN PL PEP
 ALPHA-METHYL-BUTYRIC-ACID PL
 PEP
 METHYL-ETHYL-ACETIC-ACID SD RT
 12-METHYL-OMEGA-TRIDECANOLIDE
 RT PL
 GAMMA-MUOULENE 1-4 RT BML
 ALPHA-MUOULENE 40-120 RT BML
 MYRCENE 130-380 RT BML
 2-NITRO-1,5-P-MENTHADIENE PL JSG
 CIS-6-NITRO-1(7),2-P-MENTHADIENE
 PL JSG
 TRANS-6-NITRO-1(7),2-P-MENTHADIENE
 PL JSG
 NONANAL TR RT BML
 2-NONANONE 1 RT
 CIS-OCIMENE 45-125 RT BML
 TRANS-OCIMENE 90-268 RT BML
 OCTANAL 1 RT BML
 OCTYL-ISOVALERATE TR RT BML
 OROSELONE PL PEP
 OSTHENOLE RT
 OSTHOLE RT
 OSTRUTOL PL PEP
 OXALIC-ACID PL PEP
 OXYPEUCEDANIN PL PEP
 OXYPEUCEDANIN-HYDRATE PL PEP
 PENTADECANAL TR RT BML
 PENTADECANOIC-ACID PL PEP
 PENTADECANOLIDE 15-37 RT BML
 PETROSELINIC-ACID PL PEP
 D-ALPHA-PHELLANDRENE 130-380 RT
 BML
 BETA-PHELLANDRENE 350-1,000 RT
 BML
 ALPHA-PHELLANDRENE-8-OL 15-40 RT
 BML
 PHELLOPTERIN PL PEP
 PIMPINELLIN PL PEP
 ALPHA-PINENE 400-1,500 SD; 1,200-
 1,550 RT
 BETA-PINENE 62-2,400 RT BML HHB
 WOI
 TRANS-PINOCARVYL-ACETATE 5-17
 RT BML
 CIS-PIPERITOL 2-5 RT BML
 TRANS-PIPERITOL TR RT BML
 PRANGOLARIN PL PEP
 PROTEIN 319,000-325,000 SD

- PSORALEN PL PEP
 QUINIC-ACID PL PEP
 RUTAMARIN PL PEP
 SABINENE 30-76 RT BML
 TRANS-SABINENE-HYDRATE TR-1 RT BML
 CIS-SABINENE-HYDRATE TR RT BML
 BETA-SITOSTEROL PL PEP
 BETA-SITOSTEROL-PALMITATE PL PEP
 BETA-SITOSTERYL-ARACHINATE PL PEP
 SPHONDIN PL PEP
 STEARIC-ACID PL PEP
 STIGMASTEROL PL PEP
 SUCCINIC-ACID PL PEP
 ALPHA-TERPINENE 3-7 RT BML
 GAMMA-TERPINENE 4-11 RT BML
 TERPINEN-4-OL TR RT BML
 ALPHA-TERPINEOL PL PEP
 TERPINOLENE 6-16 RT BML
 TETRADECANAL TR-2 RT BML
 ALPHA-THUJENE TR RT BML
 BETA-THUJENE 6,900-8,700 RT
 TRIDECANOIC-ACID PL PEP
 TRIDECANOLIDE 15-45 RT BML
 UMBELLIFEREN PL PEP
 UMBELLIFERONE PL PEP
 UMBELLIPRENIN 4 SD PEP
 CIS-VERBENOL 3-10 RT BML
 TRANS-VERBENOL 20-64 RT BML
 TRANS-VERBENYL-ACETATE 15-46 RT BML
 TRANS-VERBENYL-2-METHYL-BUTYRATE 1-4 RT BML
 TRANS-VERBENYL-ISOVALERATE 6-17 RT BML
 VISNAGIN PL PEP
 XANTHOTOXIN 2 SD PEP
 XANTHOTOXOL SD PEP
 XANTHOXYLETIN PL PEP
 ZOZYMIN PL PEP
- BYAKANGELICIN RT CCO
 BYAKANGELICOL RT CCO
 CALCIUM 2,140 RT SMO
 CEDRELOPSIN RT CCO
 CNIDILIN RT CCO
 COPPER 10 RT SMO
 6,7-DIMETHYLESCULETIN RT CCO
 5-(2-HYDROXY-3-METHOXY-3-METHYLBUTOXY)PSORALEN RT CCO
 8-HYDROXY-5-METHOXYPSORALEN RT CCO
 IMPERATORIN RT CCO
 IRON 1,800 RT SMO
 ISOBYAKANGELICOL RT CCO
 ISOIMPERATORIN RT CCO
 MAGNESIUM 3.670 RT SMO
 MANGANESE 110 RT SMO
 MARMESIN RT CCO
 5-METHOXY-8-HYDROXYPSORALEN RT CCO
 6-METHOXY-7-ISOPENTENYLOXYCOUMARIN RT CCO
 TERT-O-METHYLBYAKANGELICIN RT CCO
 NEOBYAKANGELICOL RT CCO
 OXYPEUCEDANIN RT CCO
 OXYPEUCEDANIN-HYDRATE RT CCO
 PANGELIN RT CCO
 PHELLOPTERIN RT CCO
 POTASSIUM 26,600 RT SMO
 PSORALEN RT CCO
 SCOPOLETIN RT CCO
 SEN-BYAK-ANGELICOLE RT CCO
 SODIUM 143 RT SMO
 XANTHOTOXIN RT CCO
 XANTHOTOXOL RT CCO
 ZINC 29 RT SMO

ANGELICA LAXIFLORA DIELS

"TU HUO"

ANGELICA DAHURICA BENTH & HOOK.

"BAI ZHI"

- SEC-O-ACETYLBYAKANGELICIN RT CCO
 ALLOISOIMPERATORIN RT CCO
 ANGELIC-ACID RT CCO
 ANGELITOXIN RT CCO
 ANHYDROBYAKANGELICIN RT CCO
 ANGELICAL RT CCO
 ANGELICONE RT CCO
 ARSENIC 0.21 RT CAL 1/
 CALCIUM 3,800 RT CAL
 COLUMBIANADIN RT CCO
 COLUMBIANETIN RT CCO
 COLUMBIANETIN-ACETATE RT CCO
 COPPER 9 RT CAL
 IRON 230 RT CAL
 MAGNESIUM 1,950 RT CAL
 MANGANESE 83 RT CAL

POTASSIUM 20,300 RT CAL
SODIUM 50 RT CAL
ZINC 15 RT CAL

1/ CAL mineral data may apply to other spp.

ANGELICA SINENSIS (OLIV.)
DIELS

“DANG GUI”

ALUMINUM 422 RT PED
ARACHIDONIC-ACID RT CCO
ASCORBIC-ACID 304 RT PED
ASH 56,000 RT PED
BERGAPTEN RT CCO
BIOTIN RT CCO
N-BUTYLIDENPHTHALIDE RT CCO
N-BUTYLPHTHALIDE RT PED
CADINENE RT PED
CALCIUM 1,680-2,820 RT PED SMO
CARBOHYDRATES 800,000 RT PED
BETA-CAROTENE 12.1 RT PED
CARVACROL RT PED
CHOLINE 2,470 RT PED
CHROMIUM 9 RT PED
COBALT 151 RT PED
COPPER 5 RT SMO
P-CYMENE RT PED
N-DODECANOL RT CCO
EO 2,000-7,000 RT CCO PED
FALCARINDIOL RT CCO
FALCARINOL RT CCO
FALCARINONE RT CCO
FAT 18,000 RT PED
FERULIC-ACID RT PED
FIBER 172,000 RT PED
FOLIC-ACID RT CCO
FOLINIC-ACID RT CCO
FRUCTOSE RT CCO
GLUCOSE RT CCO
IRON 750-880 RT PED SMO
ISOSAFROLE RT PED
KILOCALORIES 2,820 RT PED
LIGUSTILIDE RT PED
LINOLEIC-ACID RT PED
MAGNESIUM 1,650-2,650 RT PED SMO
MANGANESE 26-71 RT PED SMO
MYRISTIC-ACID RT PED
NICOTINAMIDE RT PED
NICOTINIC-ACID RT CCO
OLEIC-ACID RT PED
PALMITIC-ACID RT PED
PANTOTHENIC-ACID RT CCO
PHOSPHORUS 3,340 RT PED

PHTHALIDES RT PED
ALPHA-PINENE RT PED
POTASSIUM 10,700-16,800 RT PED SMO
PROTEIN 130,000 RT PED
RIBOFLAVIN 3.4 RT PED
SAFROLE RT PED
SCOPOLETIN RT CCO
SEDANOIC-ACID RT CCO
SELENIUM 3.5 RT PED
SESQUITERPENE RT PED
SILICON 34 RT PED
BETA-SITOSTEROL RT CCO
BETA-SITOSTEROL-GLUCOSIDE RT
CCO
SODIUM TR-539 RT PED SMO
STEARIC-ACID RT PED
SUCROSE RT CCO
THIAMIN TR RT PED
TIN 4 RT PED
UMBELLIFERONE RT CCO
N-VALEROPHENONE-O-CARBONIC-
ACID RT CCO
N-VALEROPHENONE-O-CARBOXYLIC-
ACID RT CCO
VANILIC-ACID RT CCO
VIT-B12 RT CCO
VIT-E 77 RT PED
WATER 780,000 RT PED
ZINC TR-17 RT PED SMO

ANIBA ROSAEODORA DUCKE

“BOIS-DE-ROSE; CAYENNE
ROSEWOOD”

ANIBINE
BENZALDEHYDE 300 EO HHB
GAMMA-CADINENE
CAMPHENE EO HHB
CINEOLE (6-10%EO)
CITRAL 1,500 EO HHB
CITRONELLOL EO WD AYL
P-CYMOL HHB
BETA-ELEMENE EO AYL
GERANIOL EO AYL
HYDROXYROSENON EO HHB
LEUDRIONOL EO HHB
LIMONENE EO AYL
LINALOOL (80%EO) AYL
CIS-LINALOOL-OXIDE EO AYL
TRANS-LINALOOL-OXIDE EO AYL
MYRCENE EO HHB
P-METHYLACETOPHENONE EO HHB
ALPHA-PINENE EO AYL
BETA-PINENE EO AYL

ROSAGERON EO HHB
 ROSLANOL EO HHB
 ROSIOENOL EO HHB
 (-)-RUBRANIN PL JSG
 SESQUITERPENES 40,000-60,000 EO
 HHB
 ALPHA-SELINENE
 ALPHA-TERPINEOL EO AYL
 L-TETRAHYDRO-DELTA-3-P-METHYL-
 ACETOPHENONE EO HHB

ANISODUS TANGUTICUS

(MAXIM.) PRASHER

“ZANG QIE”

ALKALOIDS 26,300 RT HHB
 ALKALOIDS 29,300 SP HHB
 ANISODAMINE PL DAA
 ATROPINE PL ALK
 CHLOROAUREATE? PL HHB
 CUSCOHYGRINE RT HHB
 HYOSCYAMINE PL ALK
 L-HYOSCYAMINE 4,000 SH HHB
 SCOPOLAMINE PL ALK
 L-SCOPOLAMINE 2,600 SH HHB

ANNONA CHERIMOLA MILL.

“CHERIMOYA”

ALMUNEQUINE SD JNP53:256
 (-)-ANONAIN LF JFM
 ANONAIN SD JFM
 ASCORBIC-ACID 50-725 FR CRC JFM
 ASH 6,100-34,000 FR CRC JFM
 ASH 12,000-15,500 SD JAD
 ASIMICIN SD JNP53:243
 1-BUTANOL PL JAD
 CAFFEINE SD JFM
 CALCIUM 78-1,455 FR CRC JAD JFM
 CALCIUM 860-1,110 SD JAD
 CAMPESTEROL 1,700-2,200 SD JAD
 CARBOHYDRATES 213,000-927,000 FR
 CRC
 BETA-CAROTENE 0-0.2 FR CRC JFM
 CELLULOSE 41,000 FR JAD
 CHERIMOLINE SD JNP53:241
 (+)-CORYTUBERINE
 DEHYDROCHERIMOLINE SD JNP53:242
 FAT 1,000-15,000 FR CRC JFM
 FAT 200,000-258,000 SD JAD
 FIBER 15,000-83,000 FR CRC JFM
 FIBER 256,000-330,300 SD JAD

HEXANOL PL JAD
 IRON 2-26 FR CRC JFM
 IRON 210-270 SD JAD
 (+)-ISOBOLDINE LF JFM
 KILOCALORIES 820-3,550 FR CRC
 LAHERRADURINE SD JNP53:247
 LANUGINOSINE SD JFM
 LINALOOL PL JAD
 LINOLEIC-ACID 350-5,300 FR JAD
 LINOLEIC-ACID 68,400-88,200 SD JAD
 LINOLENIC-ACID 265-4,020 FR JAD
 LIRIODENINE SD JFM
 MAGNESIUM 200-1,000 FR JAD
 MAGNESIUM 810-1,045 SD JAD
 MANGANESE 1-5 FR JAD
 MANGANESE 80-100 SD JAD
 3-METHYL-1-BUTANOL PL JAD
 MICHELALBINE SH JFM
 NIACIN 9-50 FR CRC JFM
 NITROGEN 2,270 FR JFM
 (+)-NORNANTENINE LF JFM
 OLEIC-ACID 95,000-122,500 SD JAD
 PALMITIC-ACID 235-3,500 FR JAD
 PALMITIC-ACID 25,200-32,500 SD JAD
 PHOSPHOLIPIDS 4,400-5,700 SD JAD
 PHOSPHORUS 240-1,510 FR CRC JFM
 PHYTOSTEROLS 15,400-20,000 SD JAD
 POTASSIUM 1,980-9,900 FR JAD
 POTASSIUM 29,500-38,000 SD JAD
 PROANTHOCYANIDINS FR HHB
 PROTEIN 11,000-49,000 FR CRC
 PROTEIN 107,000-138,000 SD JAD
 (+)-RETICULINE SD JFM
 RIBOFLAVIN 1-5.5 FR JFM
 BETA-SITOSTEROL 10,000-14,000 SD
 JAD
 SODIUM 57-285 FR JAD
 SODIUM 68-88 SD JAD
 (-)-STEPHOLIDINE LF JFM
 STIGMASTEROL 3,080-4,000 SD JAD
 SUGARS 119,000 FR JAD
 THIAMIN 1-4 FR CRC JFM
 TRIGLYCERIDES 174,000-224,500 SD
 JAD
 WATER 687,000-771,000 FR CRC JFM
 WATER 225,000 SD JAD
 ZINC 3-15 FR JAD

ANNONA MURICATA L

“SOURSOP”

ACETALDEHYDE PL PEP
 ALUMINUM 5 FR JAD

AMYL-CAPROATE PL PEP
 AMYLOID PL PEP
 ANNONAIN PL HHB
 ANOMURICINE PL PEP
 ANOMURICININE PL PEP
 ANOMURINE PL PEP
 ANONOL PL PEP
 ASCORBIC-ACID 190-1,540 FR CRC USA
 ASH 5,000-38,000 FR CRC USA
 ATHEROSPERMININE PL PEP
 BORON 3 FR JAD
 CAFFEIC-ACID PL PEP
 CALCIUM 140-2,600 FR CRC JAD USA
 CAMPESTEROL PL PEP
 CARBOHYDRATE 149,000-89,400 FR
 CRC USA
 BETA-CAROTENE 0-0.6 FR CRC USA
 CELLOBIOSE PL PEP
 CHOLESTEROL PL PEP
 CITRIC-ACID PL PEP
 CITRULLINE PL PEP
 COCLAURINE PL PEP
 COPPER 1.6 FR JAD
 COREXIMINE PL PEP
 P-COUMARIC-ACID PL PEP
 DEXTROSE PL PEP
 ETHANOL PL PEP
 FAT 2,000-24,000 FR CRC USA
 FAT 221,000 SD JAD
 FIBER 6,000-65,000 FR CRC USA
 FOLIC-ACID PL PEP
 FRUCTOSE PL PEP
 GABA PL PEP
 GALACTOMANNAN PL PEP
 GERANYL-CAPROATE PL PEP
 GLUCOSE PL PEP
 HCN PL HHB
 IRON 5-33 FR CRC USA
 ISOCITRIC-ACID PL PEP
 KILOCALORIES 590-3,550 FR CRC USA
 LIGNOCERIC-ACID PL PEP
 LYSINE 600-3,180 FR USA
 MAGNESIUM 210-2,400 FR JAD USA
 MALIC-ACID PL PEP
 MANGANESE 2.7 FR JAD
 MERICYL-ALCOHOL PL PEP
 METHANOL PL PEP
 METHIONINE 70-370 FR USA
 METHYL-HEXANOATE PL PEP
 METHYL-HEX-2-ENOATE PL PEP
 MURICINE PL HHB
 MURICININE PL HHB
 MYRISTIC-ACID PL PEP

NIACIN 9-77 FR CRC USA
 NITROGEN 2,700 FR JAD
 PARAFFIN PL PEP
 PANTOTHENIC-ACID 2.5-13 FR USA
 PHOSPHORUS 210-3,400 FR CRC JAD
 USA
 POTASSIUM 2,550-36,000 FR JAD USA
 POTASSIUM-CHLORIDE PL PEP
 PROCYANIDIN PL PEP
 PROTEIN 10,000-60,000 FR CRC USA
 PROTEIN 214,300 SD JAD
 RESIN PL PEP
 RETICULINE PL PEP
 RIBOFLAVIN 0.5-6 FR CRC USA
 SCYLLITOL PL PEP
 SFA 62,000 SD JAD
 BETA-SITOSTEROL PL PEP
 SODIUM 65-1,035 FR CRC JAD USA
 STEARIC-ACID PL PEP
 STEPHARINE PL PEP
 STIGMASTEROL PL PEP
 SUCROSE PL PEP
 SULFUR 210-2,700 FR JAD
 TANNIN PL HHB
 THIAMIN 0.7-4.8 FR CRC USA
 TRYPTOPHAN 110-585 FR USA
 UFA 159,000 SD JAD
 VIT-B6 0.6-3 FR USA
 WATER 811,600-832,000 FR CRC USA
 XYLOSYL-CELLULOSE PL PEP
 ZINC 4 FR JAD

ANNONA RETICULATA L.

"CUSTARD APPLE"

ANONAIN 1,200 BK JFM
 ASCORBIC-ACID 150-1,400 FR CRC JFM
 ASH 5,000-11,100 FR CRC JFM
 CALCIUM 176-1,270 FR CRC JFM USA
 CARBOHYDRATES 185,000-884,000 CRC
 JAD
 BETA-CAROTENE 0-0.2 FR CRC JFM
 COCLAURINE PL PEP
 COUMARINS PL PEP
 1,2-DISEHYDRONORCOCLAURINE PL
 PEP
 DOPAMINE PL PEP
 FAT 2,000-21,000 FR CRC
 FAT 400,000 SD HHB
 FIBER 8,000-119,000 FR CRC JFM
 HCN PL PEP
 HEXADECANOIC-ACID PL PEP

14-HYDROXY-25-DESOXYROLLINICIN
BK JNP53:237
IRON 4-47 FR CRC JFM
KILOCALORIES 800-3,540 FR CRC JFM
LEUCOANTHOCYANINS PL PEP
LINOLEIC-ACID PL PEP
LIRODENINE RT JFM
LYSINE 370-1,300 FRE USA
MAGNESIUM 180-630 FR USA
METHIONINE 40-140 FR USA
MICHELALBINE PL CCO
MURICININE RT JFM
MYRISTIC-ACID PL PEP
NIACIN 5-38 FR CRC JFM
NICOTINIC-ACID 0.5-2.5 FR JFM
NORCOCLAURINE PL PEP
NORCOCLAURINE-CARBOXYLIC-ACID
PL PEP
OLEIC-ACID PL PEP
PALMITIC-ACID PL PEP
PANTOTHENIC-ACID 5-17 FR USA
PHOSPHORUS 147-1,475 FR CRC JFM
POTASSIUM 3,300-22,810 FR CRC USA
PROTEIN 11,700-89,000 FR CRC JFM
RETICULINE RT JFM
RIBOFLAVIN 0.7-5.5 FR CRC JFM
SALSOLINOL PL PEP
SODIUM 25-275 FR CRC USA
STEARIC-ACID PL PEP
TANNIC-ACID PL PEP
TANNIN BK HHB
THIAMIN 0.7-5 FR CRC JFM
TRYPTOPHAN 70-245 FR USA
VIT-B6 2-8 FR USA
WATER 683,000-801,000 FR JFM

ANNONA SQUAMOSA L.

“SUGAR-APPLE”

“SWEETSOP”

17-ACETOXY-19-KAURANAL PL JSG
ANNONACIN SD JNP
ANNONACIN-A SD JNP53:252
ANNONASTATIN SD JNP53:252
ANNONIN-I SD JNP53:247
ANNONIN-VI SD JNP53:248
ANOLOBINE RT CCO
ANONAIN SD JFM
APORPHINE PL JFM
ARACHIDIC-ACID PL PEP
ARGININE FR HHB
ASCORBIC-ACID 340-1,600 FR CRC USA
ASH 7,000-40,000 FR CRC USA
ASIMICIN SD JNP53:243

ASPARAGINE PL PEP
BORNEOL LF PEP
BORNYL-ACATATE PL PEP
BORON 107 LF JAD
BULLATACIN BK JNP53:245
BULLATACINONE BK JNP53:246
CADALENE PL PEP
CALCIUM 216-1,335 FR CRC USA
CALCIUM 21,200 LF JAD
CAMPHOR PL PEP
CARBOHYDRATES 200,000-904,000 FR
CRC USA
BETA-CAROTENE 0-0.2 FR CRC
ALPHA-CARYOPHYLLENE PL JSG
BETA-CARYOPHYLLENE LF JFM
CEROTIC-ACID PL PEP
CHOLESTEROL PL PEP
CITRIC-ACID PL PEP
CITRULLINE FR HHB
CORYDINE LF JFM
DEMETHYLCOCLAURINE LF CCO
DIENONE PL JFM
FARNESENE PL PEP
FAT 2,000-21,000 FR CRC USA
FAT 140,000-490,000 SD JFM
FIBER 12,000-71,000 FR CRC USA
FRIEDELIN LF CCO
FRUCTOSE FR PEP
GABA FR HHB
GLAUCINE LF JFM
GLUCOSE 72,900-272,500 FR JFM
HCN PL PEP
HEXADECANOIC-ACID PL PEP
HEXAHYDRO-3H-1,3-DIAZEPINE-2,4-
DIONE PL PEP
HIGENAMINE LF PEP
17-HYDROXYKAURAN—19-AL PL JSG
IRON 6-66 FR CRC USA
ISOCORYDINE LF JFM
(-)-KAURAN-17-ACETOXY-19-AL PL
PEP
(-)-KAURAN-17-OL-19-AL PL PEP
KAUR-16-EN-19-AL PL PEP
(-)-KAUR-16-EN-19-OIC-ACID BK CCO
KAUR-16-EN-19-OL PL PEP
KAUR-16-EN-19-YL-ACETATE PL PEP
KILOCALORIES 780-3,530 FR CRC USA
LANUGINOSINE LF CCO
LIMONENE PL PEP
LIRIODENINE RT BK CCO
LYSINE 550-2,055 FR USA
MAGNESIUM 210-785 FR USA
MALIC-ACID PL PEP
MANGANESE 253 LF JAD

METHIONINE 70-260 FR USA
 (+)-O-METHYLARMEPAVINE LF CCO
 MICHELALBINE RT CCO
 NEOANNONIN SD JNP53:249
 NIACIN 8-36 FR USA
 4-(2-NITROETHYL)PHENOL-O-
 PRIMEVEROSIDE PL PEP
 NITROGEN 36,000 LF JAD
 NITROHETEROSIDE PL PEP
 4-(2-NITROMETHYL)-1-(6-O-BETA-D-
 XYLOPYRANOSYL-BETA-D-
 GLUCOPYRANOSYL)-OXYBENZENE
 NITROSOCHLORIDE PL PEP
 NORCORYDINE LF JFM
 NORISOCORYDINE LF JFM
 NORLAURELINE LF JFM
 NORUSHINSUNINE PL PEP
 TRANS-OCIMENE PL PEP
 ORNITHINE FR HHB
 PANTOTHENIC-ACID 2-8 FR USA
 PARAFFIN PL PEP
 PHOSPHORUS 260-1,600 FR CRC USA
 ALPHA-PINENE PL PEP
 BETA-PINENE PL PEP
 POTASSIUM 2,200-13,290 FR CRC USA
 PROTEIN 14,000-86,590 FR CRC USA
 RESIN PL PEP
 RETICULINE PL PEP
 RIBOFLAVIN 1-5 FR USA
 ROEMERINE LF JFM
 SODIUM 50-457 FR CRC USA
 SQUAMOCIN SD JNP53:244
 SQUAMOLONE RT CCO
 SUCROSE 72,900-272,500 FR JFM
 SUGAR 145,800-545,000 FR JFM
 TANNIN PL PEP
 TARTARIC-ACID PL PEP
 THIAMIN 1-5 FR USA
 TRYPTOPHAN 100-375 FR USA
 VIT-B6 2-8 FR USA
 (-)-XYLOPINE LF CCO
 WATER 728,000-775,000 FR CRC USA

ANOGEISSUS LATIFOLIA WALL.

"GUM GHATTI"

ALDOBIOURONIC-ACID PL PEP
 ALDOBIOURONIC-ACID-6-O-BETA-D-
 GLUCURONYSL-D-GALACTOSE PL
 PEP
 ALDOTRIOURONIC-ACID PL PEP
 ARABINOSE PL PEP
 ASH 95,000 LF CRC
 CALCIUM 30,300 LF CRC

CARBOHYDRATES 694,000 LF CRC
 CHEBULAGIC-ACID PL PEP
 CORILAGEN PL PEP
 5-DEHYDROSHIKIMIC-ACID PL PEP
 DIHYDROSHIKIMIC-ACID PL PEP
 3,3'-DI-O-METHYL-ELLAGIC-ACID PL
 PEP
 3,3'-DI-O-METHYL-ELLAGIC-ACID-4'-
 BETA-D-GLUCOSIDE PL PEP
 3,3'-DI-O-METHYL-ELLAGIC-ACID-4'-
 BETA-D-XYLOSIDE PL PEP
 3,3'-DIMETHYLETHER PL PEP
 ELLAGIC-ACID PL PEP
 ELLAGITANNIN PL PEP
 FAT 36,000 LF CRC
 FIBER 242,000 LF CRC
 FRUCTOSE PL PEP
 GALACTOSE GUM WOI
 GALLIC-ACID PL PEP
 GALLOTANNIN PL PEP
 GLUCOSE PL PEP
 D-GLUCURONIC-ACID PL PEP
 2-O-BETA-D-GLUCURONOSYL-
 GLYCEROL PL PEP
 2-O-BETA-D-GLUCUROPYRANOSYL-
 GLYCEROL
 PL PEP
 2-O-BETA-D-GLUCURONOSYL-D-
 MANNOSE PL PEP
 2-O-(BETA-D-GLUCURONOSYL-
 URONIC-ACID)-D-MANNOSE PL PEP
 O-(BETA-D-GLUCURONOSYL-URONIC-
 ACID)-(1,2)-O-D-MANNOPYRANOSYL-
 (1,2)-d-MANNOSE PL PEP
 LEUCOANTHOCYANIDIN PL PEP
 (+)-LEUCOCYANIDIN PL PEP
 METHYL-PENTOSE PL PEP
 MYRICETIN PL PEP
 PENTOSE GUM WOI
 PEROXIDASE PL PEP
 PROCYANIDIN PL PEP
 PHOSPHORUS 3,400 LF CRC
 POLYPHENOL-OXIDASE PL PEP
 PROTEIN 75,000 LF CRC
 PYROGALLOL PL PEP
 QUERCETIN PL PEP
 QUINIC-ACID PL PEP
 RHAMNOSE PL PEP
 SHIKIMIC-ACID PL PEP
 SITOSTEROL PL PEP
 TANNASE PL PEP
 TANNIN 322,000-329,000 LF WOI
 TANNIN 100,000-150,000 BK WOI
 TRIGALLIC-ACID PL PEP

3,3',4'-TRI-O-METHYL-ELLAGIC-ACID
PL PEP
TRIMETHYL-ETHER PL PEP
3,4,3,TRIMETHYL-ETHER PL PEP
3,3',4'-TRI-O-METHYLFLAVELLAGIC-
ACID PL PEP
3,3',4'-TRI-O-METHYLFLAVELLAGIC-
ACID-4'-BETA-D-GLUCOSIDE PL PEP
TUGALLIC-ACID PL PEP
URONIC-ACID PL PEP
WATER 123,000-128,000 LF WOI
XYLOSE PL PEP

ANTHRISCUS CEREFOLIUM (L.)
HOFFM.

“CHERVIL”

1-ALLYL-2,4-DIMETHOXYBENZENE EO
ABS
APIIN JAD
ASH 166,000-178,950 LF CRC USA
CALCIUM 13,460-14,509 LF CRC USA
CARBOHYDRATES 491,000-529,300 LF
CRC USA
COPPER 4.4 LF USA
DEOXYPICROPODOPHYLLIN ABS
DEOXYPODOPHYLLOTOXIN
EO 300 PL HHB
EO 9,000 SD HHB
FAT 105,000-156,000 SD HHB CRC
FAT 39,000-42,040 LF CRC USA
FIBER 113,000-121,815 LF CRC USA
IRON 320-345 LF CRC USA
LINOLEIC-ACID 68,900 SD HHB
MAGNESIUM 1,300-1,400 LF CRC USA
MANGANESE 21 LF USA
METHYL-CHAVICOL EO HHB
PALMITIC-ACID 6,500 SD HHB
PETROSELINIC-ACID 53,300 SD HHB
PHOSPHORUS 4,500-4,850 LF CRC USA
POTASSIUM 47,400-51,200 LF CRC USA
PROTEIN 188,000-194,000 SD CRC
PROTEIN 232,000-250,100 LF CRC USA
SODIUM 830-895 LF CRC USA
VIT-B6 11-14 LF CRC USA
WATER 72,000 LF CRC USA
ZINC 9-10 LF CRC USA

APIUM GRAVEOLENS L.

“CELERY”

ACETALDEHYDE LF HHB
ACETIC-ACID

ADENINE PL NAP
ADENOSINE PL NAP
ALANINE 220-4,665 PE USA
ALLOOCIMENE-I 1,000 EO (LF) NAP
ALLOOCIMENE-I TR EO (LF) NAP
ALLOOCIMENE-II 1,000 EO (LF) NAP
ALLOOCIMENE-II TR EO (LF) NAP
ALUMINUM 0.3-9 RT AAS
5-ALPHA-ANDROST-16-EN-3-ONE 0.009
PL NAP
TRANS-ANETHOLE 1 BML
ANGELIC-ACID
ANILINE 0.7 PE NAP
APIGENIN PL PEP
APIGENIN-7-BETA-APIOSYL-GLU-
COSIDE LF HHB
APIGRAVIN SD CCO
APIIN 2,000 PL NAP
APIOL EO NAP
APIUMETIN 12.5 SD NAP
APIUMETRIN SD CCO
APIUMOSIDE SD 411/
ARABINOSE PL PEP
ARGININE 200-4,105 PE USA
ARSENIC 0.01-0.09 RT AAS
ARSENIC-OXIDE PL PEP
ASCORBIC-ACID 58-2,778 PE HHB
USA
ASCORBIC-ACID 17-129 PL NAP
ASCORBIC-ACID 171-182 SD USA
ASH 85,500-106,294 SD USA
ASH 6,000-219,000 PE HHB USA
ASH 8,300-100,000 RT AAS
ASPARAGINE RT HHB
ASPARTIC-ACID 1,130-23,880 PE USA
BENTONITE PL PEP
BENZOIC-ACID-4-O-BETA-D-GLU-
COSIDE 3 RT NAP
BENZOIC-ACID-4-O-BETA-D-GLU-
COSIDE 56 SD NAP
BENZOYL-BENZOATE LF BML
N-6-BENZYL-ADENINE SD NAP
N-6-BENZYL-ADENINE-RIBOSIDE SD
NAP
BENZYLAMINE 3.4 ST NAP
BERGAPTEN 0.04-0.35 PE NAP
BERGAPTEN 1-520 PL NAP
BERGAPTEN 1 SD NAP
BORON 4-103 RT AAS BOB
BORON 43-61 SD BOB
BROMINE <1 RT AAS
3-BUTYLHEXAHYDROPHthalide RT
NAP
BUTYLIDENE-NAPHTHALIDE EO NAP

BUTYLIDENE-PHTHALIDE 4,000 EO (FR) NAP	CELERIN SD NAP
BUTYLIDENE-PHTHALIDE 15,000 EO (LF) NAP	CELERSIDE SD 411/ NAP
BUTYLIDENE-PHTHALIDE 12,000 EO (PE) NAP	CHLOROGENIC-ACID LF NAP
E-BUTYLIDENEPHTHALIDE	CHOLINE RT HHB
Z-BUTYLIDENEPHTHALIDE	CHOLINE-ASCORBATE LF NAP
BUTYLPHENYL-KETONE	CHROMIUM 0.002-0.045 RT AAS
3-BUTYLPHTHALIDE 40-120 SD BML	CHRYSOERIOLO-7-APIOSYL-GLUCOSIDE SD NAP
3-N-BUTYLPHTHALIDE SD BML	CITRIC-ACID PE NAP
3-N-BUTYL-4,5-DIHYDROPHTHALIDE SD BML	CITRONELLAL LF BML
N-BUTYLPHTHALIDE 190-1,800 SD BML	CITRONELLYL-ACETATE LF BML
N-BUTYLPHTHALIDE 30 RT NAP	CNIDILIDE RT BML
N-BUTYLPHTHALIDE 50,000-72,000 EO (FR) NAP	COBALT <0.005 RT AAS
3-N-BUTYL-PHTHALIDE 108,000 EO (FR) NAP	COPPER 0.4-7 PE USA
3-N-BUTYL-PHTHALIDE 40,000 EO (LF) NAP	COPPER 0.7-11 RT AAS
CADMIUM 0.001-0.364 RT AAS	COPPER 14 SD USA
CAFFEIC-ACID LF NAP	P-COUMARIC-ACID RT HHB
CALCIUM 15,814-20,776 SD USA	COUMARIN PL PEP
CALCIUM 313-11,918 PE CRC USA	P-COUMAROYL-QUINIC-ACID LF NAP
CALCIUM 340-3,635 RT AAS	P-CYMENE 2,000-31,000 EO (FR) NAP
CAMPHENE 1,000 EO (LF) NAP	P-CYMENE 17,000 EO (PE) NAP
CAPRIC-ACID 200-213 LF USA	P-CYMENE 31,000 EO (RT) NAP
CARBOHYDRATES 413,500-439,964 SD USA	P-CYMENE 190-775 SD BML
CARBOHYDRATES 36,300-684,980 PE CRC USA	CYSTINE 40-755 PE USA
CAR-3-ENE EO NAP	DECYL-ACETATE LF BML
BETA-CAROTENE 1-144 PE CRC USA	DEHYDROASCORBIC-ACID PL NAP
CAROTENES 80-145 LF HHB JAD	DIACETYL LF BML
CIS-CARVEOL 1,000 EO (FR) NAP	CIS-1(7),8-DIEN-2-OL
TRANS-CARVEOL 1,000 EO (FR) NAP	DIHYDROCARVEOL LF BML
CARVEOL-ACETATE PL NAP	DIHYDROCARVONE 0-5,000 EO (SD) NAP
CARVONE 550,000 EO (FR) NAP	DIHYDROCARVONE 19-75 SD BML
CARVONE 2,000-5,000 EO (SD) NAP	CIS-DIHYDROCARVONE 1 SD BML
CARVONE 19-75 SD BML	TRANS-DIHYDROCARVONE 14,000 EO (FR) NAP
CARVONE 1 LF BML	DIHYDROCARVYL-ACETATE
CARVYL-ACETATE LF BML	DIHYDROCARVEOL 2,000 EO (FR) NAP
CIS-CARVYL-ACETATE LF BML	DIHYDRONEOCARVEOL 1,000 EO (FR) NAP
TRANS-CARVYL-ACETATE 1 BML	DIHYDRONEOISOCARVEOL 2,000 EO (FR) NAP
BETA-CARYOPHYLLENE 5,000-43,000 EO (FR) NAP	CIS-DIHYDRO-ISOCARVONE 15,000 EO (FR) NAP
BETA-CARYOPHYLLENE 5,000 EO (LF) NAP	4-DIHYDROPHTHALIDE 57-1,500 SD BML
BETA-CARYOPHYLLENE 95-1,075 SD BML	DIMETHYLAMINE 5.1 PE NAP
CELEROIN 13.3 SD NAP	ALPHA-P-DIMETHYL-STYRENE 170-270 SD BML
CELEROSEIDE SD NAP	DI-N-PROPYL-AMINE 0.9 PE NAP
	DODECANAL LF BML
	BETA-ELEMENE TR-35,000 EO (FR) NAP
	BETA-ELEMENE 1-875 SD
	BETA-ELEMENE LF BML
	EO 19,000-30,000 SD BML HHB

- TRANS-1,2-EPOXYLIMONENE 1 SD
 BML
 EUDESMOL 5,000-10,000 EO (FR) NAP
 ALPHA-EUDESMOL 76-225 SD BML
 BETA-EUDESMOL 76-225 SD BML
 EUGENOL PL PAS
 FALCARINDIOL 3.3 RT NAP
 FALCARINONE 1.7 RT NAP
 TRANS-FARNESENE EO NAP
 FAT 242,730-279,483 SD USA
 FAT 1,300-42,000 LF CRC USA
 FERULIC-ACID RT HHB
 FIBER 106,750-138,586 SD USA
 FIBER 6,900-158,000 PE CRC USA
 FOLIACIN 0.3-5.6 PE USA
 FORMALDEHYDE PL HHB
 FRUCTOSE PL NAP
 FUMARIC-ACID PE NAP
 GALACTOSE PL PEP
 GALACTURONIC-ACID PL PEP
 GENTISIC-ACID LF NAP
 GERANYL-ACETATE LF BML
 GERANYL-BUTYRATE LF BML
 GLUCOSE PL NAP
 GLUCOSIDASE PL PEP
 GLUTAMIC-ACID 860-18,285 PE USA
 GLUTAMINE RT HHB
 GLYCINE 210-4,290 PE USA
 GLYCOLIC-ACID RT CRC NAP
 GRAVEOBIOSIDE-A SD NAP
 GRAVEOBIOSIDE-B SD NAP
 GUAIACOL LF SD CRC(FSN)
 HEPTANAL LF BML
 HEPTANOL LF BML
 HEXANAL LF BML
 HEXANOL LF BML
 CIS-3-HEXEN-1-YL-PYRUVATE LF BML
 CIS-3-HEXENOL EO BML
 CIS-3-HEXENOL-PYRUVATE PL NAP
 TRANS-2-HEXENOL EO BML
 TRANS-3-HEXENOL EO NAP
 CIS-3-HEXENYL-ACETATE
 HISTIDINE 110-2,425 PE USA
 ALPHA-HUMULENE 266-2,500 LF BML
 BETA-HUMULENE SD BML
 P-HYDROXYCINNAMIC-ACID PL PEP
 8-HYDROXYFALCARINONE 8.3 RT NAP
 8-HYDROXY-5-METHOXYPORALEN
 375 SD NAP
 HYPOXANTHINE PL NAP
 INDOSTEROL 300 PE NAP
 INOSINE PL NAP
 INOSITOL LF HHB
 ALPHA-IONONE
 IRON 361-571 SD USA
 IRON 3-347 PE CRC USA
 IRON 3.6-47 RT AAS
 ISOAMYL-ALCOHOL LF BML
 3-ISOBUTYLIDENE-PHTHALIDE 0.001
 PL NAP
 ISOBUTYRIC-ACID LF BML
 ISOBUTYLIDENE 32 LF BML
 ISOBUTYLIDENE-3-A,4-
 DIHYDROPHTHALIDE 17,000 EO (FR)
 NAP
 ISOBUTYLIDENE-3-A,4-
 DIHYDROPHTHALIDE 40,000 EO (LF)
 NAP
 ISOBUTYLIDENE-3-A,4-
 DIHYDROPHTHALIDE 21,000 EO (PE)
 NAP
 3-ISOBUTYLIDENE-3-A,4-
 DIHYDROPHTHALIDE 133-1,500 SD
 BML
 ISOBUTYRIC-ACID PL PEP
 ISOCHLOROGENIC-ACID LF NAP
 ISOCITRIC-ACID RT NAP
 ISOIMPERATORIN SD CCO
 ISOLEUCINE 200-4,290 PE USA
 N-6-ISOPENT-2-ENYL-ADENOSINE SD
 NAP
 ISOPIMPINELLIN 0.05-0.41 PE NAP
 ISOPIMPINELLIN 4-122 PL NAP
 ISOQUERCITRIN SD CCO
 3-ISOVALENERIDENE-PHTHALIDE LF
 BML
 ISOVALERIC-ACID 1 SD BML
 ISOVALERIC-ACID-ETHYL-ESTER PL
 NAP
 3-ISOVALENERIDENE-3A,4-
 DIHYDROPHTHALIDE LF HHB
 3-ISOVALENERIDENE-3A,4-
 DIHYDROPHTHALIDE 0.003 LF NAP
 3-ISOVALENERIDENE-3A,4-
 DIHYDROPHTHALIDE 255 EO (SD)
 NAP
 3-ISOVALENERIDENE-PHTHALIDE 0.0001 PL
 BML NAP
 KETO-ALCOHOL 2,140-3,390 SD BML
 LAURIC-ACID 200-213 SD USA
 LEAD 0.01-2 RT AAS
 LEUCINE 310-6,530 PE USA
 LIGUSTILIDE 2,000-5,000 EO NAP
 E-LIGUSTILIDE 1 BML
 Z-LIGUSTILIDE 1-5 BML
 LIMONENE 530-24,000 SD BML
 LIMONENE 350,000-706,000 EO (FR)
 NAP

LIMONENE 695,000 EO (PE) NAP
 LIMONENE 117,000 EO (RT) NAP
 CIS-LIMONENE-OXIDE SD BML
 TRANS-LIMONENE-OXIDE SD BML
 LINALOOL 1 SD BML
 LINALYL-ACETATE LF BML
 LINASE PL PEP
 LINOLEIC-ACID 31,310-41,592 SD USA
 LINOLEIC-ACID 60-1,132 LF USA
 LINOLEIC-ACID 690-12,875 PE USA
 ALPHA-LINOLENIC-ACID 1,600-2,554 SD USA
 LUTEOLIN LF NAP
 LUTEOLIN-7-APIOSYL-GLUCOSIDE FR NAP
 LUTEOLIN-7-O-BETA-GLUCOSIDE PL NAP
 LUTEOLIN-GLYCOSIDE PL PEP
 LYSINE 260-5,410 PE USA
 MAGNESIUM 4,192-4,903 SD USA
 MAGNESIUM 99-2,650 LF USA
 MAGNESIUM 140-1,635 RT AAS
 MALIC-ACID PE NAP
 MANGANESE 1-33 PE USA
 MANGANESE 0.74-23 RT AAS
 MANGANESE 76 SD USA
 MANNITOL 50,000 RT NAP
 MANNITOL 10,000-20,000 ST NAP
 P-MENTHA-8(9)-EN-1,2-DIOL SD BML
 CIS-P-MENTHA-2,8-DIEN-1-OL SD BML
 TRANS-P-MENTHA-2,8-DIEN-1-OL TR SD BML
 TRANS-P-MENTHA-1(7),8-DIEN-2-OL TR SD BML
 CIS-P-MENTHA-1(7),8-DIEN-2-YL-ACETATE
 P-MENTH-8(9)-ENE-1,2-DIOL EO NAP
 MENTHONE EO NAP
 MERCURY 0.0004-0.027 RT AAS
 METHIONINE 50-1,120 PE USA
 P-METHOXY-CINNAMIC-ACID 7.5 SD NAP
 5-METHOXY-8-O-BETA-D-GLUCOSYL-OXYPsorALEN 2.9 SD NAP
 5-METHOXYPSORALEN 0-7 FR
 5-METHOXYPSORALEN 2 LF WAX
 8-METHOXYPSORALEN 0-1 LF
 METHYLAMINE 6.4 PE NAP
 N-METHYL-ANILINE 7 PE NAP
 3-METHYL-4-ETHYL-HEXANE 124,000 EO (RT) NAP
 S-METHYL-METHIONINE PL PEP
 N-METHYL-PHENETHYLAMINE 0.5 PE NAP
 MOLYBDENUM <0.1 RT AAS
 MUCILAGE PL PEP
 MUFA 270-5,035 PE USA
 MYRCENE 190-300 SD BML
 MYRCENE 2,000-61,000 EO (FR) NAP
 MYRCENE 14,000 EO (LF) NAP
 MYRCENE 18,000 EO (PE) NAP
 MYRCENE 18,000 EO (RT) NAP
 MYRISTIC-ACID 200-213 SD USA
 MYRISTIC-ACID 10-190 PE USA
 MYRISTICIN PL PAS
 NEOCNIDOLIDE 17 RT NAP
 NEOCNIDILIDE 70-260 BML
 NERAL LF BML
 NERYL-ACETATE LF BML
 NIACIN 3-57 PE CRC USA
 NICKEL 0.04-0.9 RT AAS
 NICOTINE PL PEP
 NITROGEN 2,000-19,090 RT AAS
 NODAKENETIC SD CCO
 NODAKENIN SD CCO
 CIS-OCIMENE 2,000-2,500 LF BML
 CIS-OCIMENE 145,000 EO (LF) NAP
 CIS-OCIMENE 78,000 EO (PE) NAP
 CIS-OCIMENE 68,000 EO (RT) NAP
 TRANS-OCIMENE 3,000 EO (FR) NAP
 TRANS-OCIMENE 20,000 EO (LF) NAP
 TRANS-OCIMENE 67,000 EO (PE) NAP
 TRANS-OCIMENE 201,000 EO (RT) NAP
 TRANS-OCIMENE LF
 OCTANAL LF BML
 OLEIC-ACID 230-4,850 PE USA
 OLEIC-ACID 146,440-162,560 SD USA
 OSTHENOL SD CCO
 OXALIC-ACID PL PEP
 PALMITIC-ACID 280-5,970 PE USA
 PALMITIC-ACID 9,470-17,375 SD USA
 PALMITOLEIC-ACID 10-190 PE USA
 PANTOTHENIC-ACID 1-36 PE USA
 PECTIN 3,000 LF PEP
 PENTOSANE 1,600 RT HHB
 N-PENTYL-AMINE 0.8 PE NAP
 PENTYL-BENZENE 9,000 EO (FR) NAP
 PENTYL-BENZENE 2,000 EO (LF) NAP
 N-PENTYL-BENZENE 190-300 SD BML
 N-PENTYL-CYCLOHEXADIENE 3,000 EO (FR) NAP
 N-PENTYL-CYCLOHEXADIENE 17,000 EO (LF) NAP
 PERILLALDEHYDE 1 SD BML
 PEROXIDASE PL PEP
 PETROSELINIC-ACID 2,400-2,554 SD USA
 ALPHA-PHELLANDRENE 2,000 FR NAP

- BETA-PHELLANDRENE 2,000 FR NAP
 PHENYLALANINE 190-4,105 LF USA
 PHYTOSTEROLS 60-1,120 PE USA
 PHOSPHORUS 201-6,849 PE CRC USA
 PHOSPHORUS 470-7,900 RT USA
 PHOSPHORUS 4,509-6,843 SD USA
 ALPHA-PINENE 38-60 SD BML
 ALPHA-PINENE TR-10,000 EO (FR) NAP
 ALPHA-PINENE 2,000 EO (LF) NAP
 ALPHA-PINENE 14,000 EO (PE) NAP
 ALPHA-PINENE 12,000 EO (PE) NAP
 ALPHA-PINENE 179,000 EO (RT) NAP
 BETA-PINENE 57-210 SD BML
 BETA-PINENE 5-15,000 EO (FR) NAP
 PINOCARVYL-ACETATE
 PIPERIDINE 1 PE NAP
 PIPERITONE FR NAP
 POLYACETYLENES RT
 POTASSIUM 13,592-15,330 SD USA
 POTASSIUM 2,689-57,800 PE CRC USA
 POTASSIUM 3,900-56,360 RT AAS
 PROLINE 170-3,208 LF USA
 PROPIONALDEHYDE 3-1050? LF BML
 N-PROPYL-AMINE 2.7 PE NAP
 PROTEIN 6,030-194,000 PE CRC USA
 PROTEIN 170,250-203,385 SD USA
 PROTOCATECHUIC-ACID PL PEP
 PSORALEN 0.03-0.15 PE NAP
 PSORALEN PL NAP
 PUFA 690-12,875 PE USA
 PYRROLIDINE 0.4-2.6 PE NAP
 PYRUVIC-ACID PL NAP
 QUERCETIN-3-GALACTOSIDE PL NAP
 QUERCETIN-3-O-BETA-GLUCOSIDE PL
 PAS
 QUINIC-ACID PE NAP
 RIBOFLAVIN 0-34 PE CRC USA
 RUBIDIUM 0.24-9 RT AAS
 RUTARETIN 10 SD NAP
 RUTIN 170 PL NAP
 SABINENE TR SD BML
 SANTALOL 874-1,150 SD BML
 SCPOLETIN PL NAP
 SCOPOLIN LF NAP
 SEDANENOLIDE 95-900 SD BML
 SEDANOIC-ACID
 SEDANOIC-ALDEHYDE PL NAP
 SEDANOIC-ANHYDRIDE 30,000-80,000
 EO (SD) NAP
 SEDANOLIDE SD 411/
 SEDANOLINE
 SEDANONIC-ANHYDRIDE 570-15,750 LF
 BML
 SELANOLIDE PL PEP
 ALPHA-SELINENE 95-250 SD BML
 BETA-SELINENE 209-8,125 SD BML
 BETA-SELINENE 55,000-325,000 EO (FR)
 NAP
 BETA-SELINENE 30,000 EO (LF) NAP
 BETA-SELINENE 10,000 EO (ST) NAP
 GAMMA-SELINENE
 D-SELINENE 2,000-3,000 SD BML
 SELENIUM <0.002 RT AAS
 SENKYUNOLIDE 30-240 RT BML
 SERINE 200-4,105 PE USA
 SESALIN SD CCO
 SFA 370-6,900 PE USA
 SHIKIMIC-ACID RT NAP
 SILICON <2 RT AAS
 SINAPIC-ACID PL PEP
 SODIUM 774-17,135 PE CRC USA
 SODIUM 1,424-1,900 SD USA
 SPINOSTEROL PL PEP
 STEARIC-ACID 30-560 PE USA
 STEARIC-ACID 3,100-5,000 SD USA
 SUCCINIC-ACID PE NAP
 SUCCINIC-ACID-DEHYDROGENASE PL
 PEP
 SUCROSE PL NAP
 SULFUR 100-1,000 RT AAS
 TARTARIC-ACID PE NAP
 TERPINEN-4-OL 1-1,400 SD BML
 TERPINEN-4-OL 1,000 EO (LF) NAP
 ALPHA-TERPINENE LF BML
 ALPHA-TERPINENE 1,000 EO (FR) NAP
 ALPHA-TERPINEOL 1 SD BML
 ALPHA-TERPINEOL 3,000-14,000 EO
 (FR) NAP
 ALPHA-TERPINEOL 2,000 EO (LF) NAP
 ALPHA-TERPINEOL 69,000 EO (RT) NAP
 GAMMA-TERPINEOL 57-125 SD BML
 GAMMA-TERPINEOL 3,000-5,000 EO
 (FR) NAP
 TERPINOLENE 2,000 EO (FR) NAP
 TERPINOLENE 2,000 EO (LF) NAP
 TERPINEOLENE 33,000 EO (RT) NAP
 ALPHA-TERPINYL-ACETATE LF BML
 ALPHA-TERPINYL-PROPIONATE LF
 BML
 THIAMIN 0-10 PE CRC USA
 THREONINE 190-4,105 PE USA
 THYMOL
 TIGLIC-ACID
 ALPHA-TOCOPHEROL 3-67 PE NAP
 ALPHA-TOCOPHEROL 0-64 PL NAP
 TOLUIDINE 1.1 PE NAP
 TRYPTOPHAN 90-1,865 PE USA
 TYROSINE 90-1,865 PE USA

UMBELLIFERONE SD CRC
 UNDECANAL LF BML
 URONIC-ACID RT NAP
 VALERIC-ACID FL BML
 VALINE 260-5,600 PE USA
 VELLEIN SD NAP
 VIT-B6 0-6 LF USA
 VIT-U 41-96 PE NAP
 WATER 60,400 SD USA
 WATER 927,000-947,000 PE USA
 WATER 890,000 RT AAS
 XANTHOTOXIN 0.04-0.61 PE NAP
 XANTHOTOXIN 6-183 PL NAP
 XYLOSE PL PEP
 ZEATIN SD NAP
 ZEATIN-RIBOSIDE SD NAP
 ZINC 54-89 SD USA
 ZINC 1-44 LF USA
 ZINC 2.8-70 RT AAS

See Fitoterapia No. 1: 20. 1985 AAS=ACTA
 AGRIC SCAND SUPPL 22 H20
 (RT)=89%; ZMB=9.09 X APB

APOCYNUM

ANDROSAEMIFOLIUM L.

“BITTERROOT”

“SPREADING DOGBANE”

ACETOVANILLIN RT 411/
 ANDROSIN RT HHB
 ANDROSTEROL PL HHB
 APOBIOSIDE RT 411/
 APOCYMARIN RT 411/
 APOCYNAMARIN PL CRC
 APOCYNEIN PL CRC
 APOCYNIN RT CRC
 CAOUTCHOUK PL CRC
 CYMARIN PL CRC
 EO 160 RT HHB
 EPURANOL RT HHB
 HOMOANDROSTEROL PL HHB
 K-STROPHANTHIN RT CTC

APOCYNUM CANNABINUM L.

“BITTERROOT”

“SPREADING DOGBANE”

ALPHA-AMYRIN RT HHB
 ANDROSTEROL RT HHB
 APOCANNOSIDE RT HHB
 CANNOGENIN RT HHB
 CYMARIN RT HHB

CYMAROL PL 411/
 CYNOCANNOSIDE RT HHB
 FAT 226,000-238,000 SD CRC
 HARMALOL RT HHB
 HOMOANDROSTEROL RT HHB
 LUPEOL RT HHB
 OLEANOLIC-ACID RT HHB
 P-OXYACETOPHENONE RT HHB
 PROTEIN 287,000-331,000 SD CRC
 RESIN PL 411/
 K-STROPHANTHIN RT HHB
 STROPHANTHIN-CYMAROSIDE PL 411/
 TANNIN PL 411/

AQUILARIA AGALLOCHA

(LOUR.) ROXB.

“LIGNUM ALOE”

ALPHA-AGAROFURAN WD CCO HHB
 BETA-AGAROFURAN WD CCO HHB
 AGAROL ST WD CCO
 AGAROSPIROL WD HHB
 AGAROTETROL WD CCO
 AQUILLOCHIN PL CCO
 BENZYLACETONE (26% EO WD) CCO
 DIHYDROAGAROFURAN EO WD CCO
 DIHYDROXYAGAROFURAN WD HHB
 3,4-DIHYDROXY-
 DIHYDROAGAROFURAN PL JSG
 GMELOFURAN ST WD CCO
 4-HYDROXYDIHYDROAGAROFURAN
 PL JSG
 LIRIODENINE WD CCO
 P-METHOXYBENZYLACETONE (53%
 EO WD) CCO
 P-METHOXYCINNAMIC-ACID WD CCO
 NORKETOAGAROFURAN WD CCO
 NOROXOAGAROFURAN WD HHB
 OXO-NOR-AGAROFURAN EO WD CCO

AQUILEGIA VULGARIS L.

“COLUMBINE”

AQUILEGNINE SD ALK
 CAPRIC-ACID SD CRC
 CAPRONIC-ACID SD CRC
 CAPRYLIC-ACID SD CRC
 DELPHINIDIN-3,5-DIGLUCOSIDE PL
 CRC
 FAT 269,000 SD CRC
 HCN PL CRC
 LAURIC-ACID SD CRC
 LINOLEIC-ACID 64,560 SD CRC

LIPASE SD CRC
 MAGNOFLORINE RT ALK
 MYRISTIC-ACID SD CRC
 NITRILE-GLYCOSIDE SD HHB
 TRANS-5,CIS-9,CIS-12-
 OCTDECATRIENOIC-ACID 161,000 SD
 HHB
 OLEIC-ACID 16,140 SD CRC
 PALMITIC-ACID 21,520 SD CRC
 PALMITOLEIC-ACID SD CRC
 PROTEIN 206,000 SD CRC
 STEARIC-ACID 5,100 SD CRC

ARACHIS HYPOGAEA L.

“PEANUT; GROUNDNUT”

ALANINE 10,390-12,137 SD USA
 ALUMINUM 14 SD AAS
 D,L-AMINOBUTYRIC-ACID PL PEP
 GAMMA-AMINOBUTYRIC-ACID PL PEP
 ALPHA-AMINO-BETA-HYDROXYBU-
 TYRIC-ACID
 GAMMA-AMINO-ALPHA-
 METHYLENEBUTYRIC-ACID
 ARACHIDIC-ACID 11,803-12,644 SD USA
 ARACHIN SD WOI
 ARGININE 31,280-37,022 SD USA
 ASCORBIC-ACID 980-4,558 LF CRC
 ASCORBIC-ACID 0-190 SD USA
 ASH 16,000-74,000 LF CRC
 ASH 73,000-116,000 PL CRC
 ASH 16,000-28,000 SD CRC
 ASPARTIC-ACID 31,900-36,968 SD USA
 BEHENIC-ACID 15,246-16,332 SD WOI
 BIOTIN SD HHB
 BORON 5-18 SD AAS BOB
 CADMIUM 0.03 SD AAS
 CAFFEIC-ACID 11 SD CRC(FNS)
 CALCIUM 2,620-21,500 LF CCG CRC
 CALCIUM 9,300-31,500 PL CRC
 CALCIUM 560-969 SD CRC USA
 CAPRYLIC-ACID PL PEP
 CARBOHYDRATES 149,000-693,000 LF
 CRC
 CARBOHYDRATES 668,000-717,000 PL
 CRC
 CARBOHYDRATES 161,800-377,000 SD
 CRC USA
 BETA-CAROTENE 77-360 LF CRC
 BETA-CAROTENE 0-0.34 SD CRC USA
 CELLULOSE 20,000-50,000 SD HHB
 ALPHA-CEPHALIN SD HHB
 CEREBRONIC-ACID PL PEP
 CHLOROGENIC-ACID 12 SD CRC(FNS)

CHOLESTEROL PL PEP
 CHOLINE SD HHB
 CHROMIUM 0.08 SD AAS
 CHRYSOERIOL PL JSG
 COBALT >0.02-0.08 SD AAS CCG
 CONARACHIN SD WOI
 CONGLUTIN SD HHB
 COPPER 8.6-11 SD AAS USA
 O-COUMARIC-ACID 10 SD CRC(FNS)
 P-COUMARIC-ACID 20 SD CRC(FNS)
 CYSTINE 3,290-3,580 SD USA
 DAUCOSTERIN PL JSG
 5,7-DIHYDROXYCHROMONE CCO
 DIHYDROXYSTEARIC-ACID PL PEP
 9,10-DIHYDROXYSTEARIC-ACID PL
 PEP
 DOCOSANOIC-ACID PL PEP
 DOCOSENIC-ACID PL PEP
 15-DOCOSENOIC-ACID PL PEP
 EICOSAMONOENOIC-ACID PL PEP
 EICOSANIC-ACID PL PEP
 EICOSENOIC-ACID PL PEP
 11-EICOSENOIC-ACID PL PEP
 13-EICOSENOIC-ACID PL PEP
 ELIPHATIC-ACID PL PEP
 ESCULETIN PL JSG
 FAT 6,000-28,000 LF CRC
 FAT 22,000-95,000 PL CRC
 FAT 194,800-526,834 SD CRC USA
 FERULIC-ACID 45 SD CRC(FNS)
 FIBER 46,000-214,000 LF CRC
 FIBER 201,000-279,000 PL CRC
 FIBER 11,900-52,383 SD CRC USA
 FUMARASE SD HHB
 FOLACIN 1-3 SD USA
 GABA PL PEP
 GADOLEIC-ACID 5,230-5,585 SD USA
 GENTISIC-ACID 14 SD CRC(FNS)
 GLUTAMIC-ACID 54,650-65,281 SD
 USA
 GLUTATHIONE SD HHB
 GLYCERIC-ACID PL PEP
 GLYCINE 15,760-18,993 SD USA
 HEPTADECANOIC-ACID PL PEP
 HEXACONIC-ACID PL PEP
 HEXACOSAENOIC-ACID PL PEP
 HEXADECENOIC-ACID PL PEP
 7-HEXADECENOIC-ACID PL PEP
 HISTIDINE 6,610-8,013 SD USA
 13-HYDROPEROXY-CIS-9,TRANS-11-
 OCTADECADIENOIC-ACID PL PEP
 13-HYDROPEROXY-TRANS-9,TRANS-11-
 OCTADECADIENOIC-ACID PL PEP
 HYDROXYBEHENIC-ACID PL PEP

P-HYDROXYBENZOIC-ACID 14 SD
 CRC(FNS)
 IRON 42-195 LF CRC
 IRON 21-42 SD CRC USA
 ISOCHLOROGENIC-ACID 3 SD
 CRC(FNS)
 ISOCITRATYLLASE SD HHB
 ISOFERULIC-ACID 0.2 SD CRC(FNS)
 ISOLEUCINE 9,200-10,680 SD USA
 ISOLINOLEIC-ACID PL PEP
 ISOOLEIC-ACID PL PEP
 ISOQUERCITRIN PL JSG
 ALPHA-KETOGLUTARIC-ACID SD HHB
 KILOCALORIES 690-3,210 LF CRC
 KILOCALORIES 3,030-6,074 SD CRC
 USA
 LAURIC-ACID PL PEP
 LEAD 0.07 SD AAS
 LECITHIN 5,000-7,000 SD WOI
 LEUCINE 16,960-20,653 SD USA
 LEUCOCYANIDIN SD HHB
 LEUCODELPHINIDIN SD HHB
 LIGNOCERIC-ACID 5,409-5,795 SD WOI
 LINOLEIC-ACID 155,300-183,655 SD USA
 ALPHA-LINOLENIC-ACID 30-110 SD
 USA
 LUETOLIN PL JSG
 LYSINE 9,390-10,627 SD USA
 MAGNESIUM 3,500-8,700 PL CCG
 MAGNESIUM 1,700-2,110 SD AAS USA
 MALVALIC-ACID PL PEP
 MANGANESE 11-30 SD USA
 MERCURY <0.004 SD AAS
 METHIONINE 2,630-3,430 SD USA
 2,4-METHYLENE-CHOLESTEROL PL
 PEP
 GAMMA-METHYLENE-ALPHA-
 KETOGLUTARIC-ACID SD HHB
 4-METHYLENEPROLINE SD HHB
 MUFA 223,280-238,520 SD USA
 MYRISTIC-ACID 250-300 SD USA
 NIACIN 16-74 LF CRC
 NIACIN 141-182 SD USA
 NITROGEN 40,000 SD AAS
 NONADECANOIC-ACID PL PEP
 NONADECENOIC-ACID PL PEP
 NONAHEXADECANOIC-ACID PL PEP
 NONAHEXADECENOIC-ACID PL PEP
 OCTADECADIENOIC-ACID PL PEP
 CIS-10-OCTADECENOIC-ACID PL PEP
 TRANS-10-OCTADECENOIC-ACID PL
 PEP
 CIS-11-OCTADECENOIC-ACID PL PEP
 OLEIC-ACID 217,570-254,065 SD USA
 PALMITIC-ACID 51,450-60,615 SD USA
 PALMITOLEIC-ACID 90-4806 SD USA
 PANTOTHENIC-ACID 17-30 SD USA
 PHENYLALANINE 13,560-15,715 SD USA
 PHLORETIC-ACID PL JSG
 PHOSPHOLIPASE-D SD HHB
 PHOSPHORIC-ACID-
 MONOESTERHYDROLASE SD HHB
 PHOSPHORUS 820-3,814 LF CRC
 PHOSPHORUS 800-10,000 PL CCG
 PHOSPHORUS 2,450-4,248 SD CRC USA
 PHYSETOLEIC-ACID PL PEP
 POTASSIUM 9,100-17,500 PL CCG
 POTASSIUM 4,210-7,681 SD CRC USA
 PRATENSIN PL JSG
 PROLINE 11,540-15,362 SD USA
 PROTEIN 44,000-205,000 LF CRC
 PROTEIN 164,000-262,000 PL CRC
 PROTEIN 150,000-275,000 SD CRC USA
 PROTOCATECHUIC-ACID 4 SD
 CRC(FNS)
 PUFA 172,040-183,785 SD USA
 QUERCETIN PL JSG
 ALPHA-RESORCYLIC-ACID PL JSG
 CIS-RESVERATROL SP CCO
 TRANS-RESVERATROL SP CCO
 RIBOFLAVIN 5.8-27 LF CRC
 RIBOFLAVIN 1.3-3.1 SD CRC USA
 RUBIDIUM 13 SD AAS
 RUTIN PL JSG
 SALICYLIC-ACID 18 SD CRC(FNS)
 SARKOSIN SD HHB
 SELENIUM 0.02 SD AAS
 SERINE 12,710-15,362 SD USA
 SFA 76,420-81,740 SD USA
 SINAPIC-ACID 14 SD CRC(FNS)
 BETA-SITOSTEROL PL JSG
 SODIUM 40-260 SD CRC USA
 SPHINGOGLYCOLIPID SD HHB
 STEARIC-ACID 10,980-13,760 SD USA
 STERCULIC-ACID PL PEP
 STIGMASTEROL PL PEP
 STIZOLAMINE SD CCO
 SULFUR 2,100 SD AAS
 SYRINGIC-ACID 51 SD CRC(FNS)
 TETRADECANOIC-ACID PL PEP
 THIAMIN 2.3-11 LF CRC
 THIAMIN 6-17 SD CRC USA
 THREONINE 7,430-9,570 SD USA
 ALPHA-TOCOPHEROL 83-116 SD TOT
 USA
 ALPHA-TOCOPHEROL 89 OI TOT
 DELTA-TOCOPHEROL SD HHB
 GAMMA-TOCOPHEROL 35 OI TOT

CIS-3,5,4'-TRIHIDROXY-4-
ISOPENTENYLSTILBENE SP CCO
TRANS-3,5,4'-TRIHIDROXY-4-
ISOPENTENYLSTILBENE SP CCO
TRIHIDROXYSTEARIC-ACID PL PEP
TRYPTOPHAN 2,540-3,321 SD USA
TYROSINE 10,630-13,198 SD USA
VALINE 10,970-12,437 SD USA
VANILLIC-ACID 43 SD CRC(FNS)
VIT-B6 2.96-3.7 SD USA
WATER 785,000 LF CRC
WATER 628,000-842,000 PL CCG
WATER 56,000-422,000 SD CRC
ZINC 31-35 SD AAS USA

ARALIA CORDATA L.

"UDO"

ASCORBIC-ACID 50-1,065 LF CRC
ASH 6,000-127,660 LF CRC
ALPHA-BETULENOL RT ABS2
DELTA-CADINENE 7 RT ABS2
CALCIUM 130-2,765 LF CRC
CAMPHENE 3 ST ABS2
CARBOHYDRATES 29,000-617,000 LF
CRC
DELTA-3-CARENE 2 RT ABS2
D-CARVONE PL ABS2
BETA-CARYOPHYLLENE 6 RT ABS2
P-CYMENE 5 RT ABS2
(ENT)-KAUR-16-EN-19-OIC-ACID PL
CPB39:405
(ENT)-PIMARA-8(14),15-DIEN-19-OIC-
ACID PL CPB39:405
EO 750 ST ABS2/
(-)-EPIPIMARIC-ACID PL HHB
ETHYL-ACETATE 3 ST ABS2
BETA-EUDESMOL 2 RT ABS2
ALPHA-FARNESENE PL ABS2
FAT 2,000-42,550 LF USA
FIBER 5,000-106,380 LF CRC
GERMACRENE-D? 16 RT ABS2
GRANDIFLORIC-ACID PL JSG
ALPHA-GUAIENE 2 ST ABS2
N-HEXANAL RT ABS
ALPHA-HUMULENE 11 RT ABS2
7ALPHA-HYDROXY-(-)-PIMARA-
8(14),15-DIEN-19-OIC-ACID PL JSG
7BETA-HYDROXY-(-)-PIMARA-8(14),15-
DIEN-19-OIC-ACID PL JSG
INTERMEDIOL 1-2 ST ABS2
IRON 3-64 LF CRC
ISOPINOCAMPHONE PL ABS2
KILOCALORIES 140-2,975 LF CRC

LAVANDULOL PL ABS2
ALPHA-LIMONENE 16 RT ABS2
P-MENTHA-DIEN-4-OL PL ABS2
MYRCENE 22 RT ABS2
NEOINTERMEDIOL 1-2 ST ABS2
NEROLIDOL 0.75 RT ABS2
NIACIN 8-170 LF CRC
OCIMENE 7 RT ABS2
7-OXO(-)-PIMARA-8(14),15-DIEN-19-OIC-
ACID PL JSG
PAEONAL 2.5 RT ABS
PHOSPHORUS 250-5,320 LF CRC
(-)-PIMARA-8(14),15-DIEN-19-AL PL JSG
(-)-PIMARA-8(14),15-DIEN-19-OIC-ACID
PL JSG
ALPHA-PINENE 475 RT ABS2
BETA-PINENE 37 RT ABS2
TRANS-PINOCAMPHONE PL ABS2
TRANS-PINOCARVEOL PL ABS2
POTASSIUM 3,100-65,950 LF CRC
PROTEIN 10,000-212,765 LF USA
RIBOFLAVIN 0.2-4 LF CRC
SABINENE 15 RT ABS2
CIS-SABINENE-HYDRATE RT ABS2
DELTA-SELINENE 11 RT ABS2
BETA-SESQUIPELLANDRENE? 8 RT
ABS2
SODIUM 20-425 LF CRC
TERPINEN-4-OL 6 RT ABS2
THIAMIN 0.6-13 LF CRC
CIS-4,11,11-TRIMETHYL-8-METHYLENE-
BICYCLO(7.2.0)UNDEC-4-ENE 7 RT
ABS2
VERBENONE 3 RT ABS2
VERBENONE 3 RT ABS2
WATER 953,000 LF CRC
ZINGIBERENE? 8 RT ABS2

ABS=SHOY ZASSHI 44:11.1990
ABS2/ NNKAISHI55(5)399-405.1981
(FRESH WEIGHT)

ARBUTUS UNEDO L.

"ARBUTUS"

"STRAWBERRY TREE"

ARBUTIN 27,000 LF HHB
ARBUTOFLAVONOL LF HHB
CRYPTOXANTHIN LF HHB
1-DOTRIACONTANOL LF HHB
ELLAGIC-ACID LF HHB
FAT 34,000-368,000 SD CRC
GALLIC-ACID LF HHB
GLYCOLIC-ACID LF HHB

HYDROQUINONE LF HHB
 LEUCODELPHINIDIN LF HHB
 LUPEOL LF HHB
 LYCOPENE LF HHB
 METHYLARBUTIN LF HHB
 MYRICETIN LF HHB
 15-NONACOSANOL LF HHB
 PHYTOFLUENE LF HHB
 PROTEIN 31,000-235,000 SD CRC
 TANNIN 450,000 BK CRC
 TANNIN 160,000 LF HHB
 1-TRIACONTANOL LF HHB
 UNEDIDE PL JSG
 UNEDOSIDE 2,000 LF HHB
 URSOLIC-ACID LF HHB
 VIOLAXANTHIN LF HHB

ARCTIUM LAPPA L.

“GOBO; GREAT BURDOCK”

ACETIC-ACID PL PED
 ALANINE 250-1,250 RT USA
 ALUMINUM 231 RT PED
 APLOTAXENE
 ARCTIC-ACID PL PED
 ARCTIGENIN PL 411/
 ARCTIGENIN-4-BETA-D-
 GLUCOPYRANOSIDE PL JSG
 ARCTIIN PL 411/
 ARCTINAL
 ARCTINOL
 ARCTINONE
 ARCTINONE-ACETATE
 ARCTIOL LF 411/
 ARGININE 1,050-5,250 RT USA
 ASH 34,000 RT PED
 ASCORBIC-ACID 30-151 RT USA
 ASPARTIC-ACID 1,770-8,850 RT USA
 BUTYRIC ACID PL PED
 CAFFEIC-ACID 2,500 RT HHB 411/
 CALCIUM 410-8,510 RT CAL JAD USA
 CARBOHYDRATES 173,500-870,150 RT
 JAD USA
 BETA-CAROTENE 4.5 RT PRD
 CHLOROGENIC-ACID RT PED
 CHROMIUM 20 RT PED
 COBALT 120 RT PED
 COPPER 29 RT CAL
 COSTIC-ACID
 CYSTINE 60-300 RT USA
 DEHYDROCOSTUS-LACTONE
 DEHYDRODIHYDROCOSTUS-LACTONE
 DEHYDROFUKINONE PL JSG
 EO 600-1,800

EREMOPHILENE LF 411/
 BETA-EUDESOL LF 411/
 FAT 1,500-8,000 RT HHB JAD USA
 FIBER 19,400-97,000 RT JAD USA
 FUKINANOLIDE LF 411/
 FUKINONE LF 411/
 GLUTAMIC-ACID 1,570-7,850 RT USA
 GLYCINE 310-1,550 RT USA
 GAMMA-GUANIDINO-N-BUTYRIC-ACID
 RT 411/
 HISTIDINE 310-1,550 RT USA
 INULIN 190,000-500,000 RT HHB PED
 IRON 8-1,470 RT CAL JAD PED USA
 ISOCHLOROGENIC-ACID
 ISOLEUCINE 300-1,500 RT USA
 ISOVALERIC-ACID PL PED
 KILOCALORIES 720-3,790 RT FNF
 LAPPAOL-A-THRU-H PL 411/
 LAPPANESTHINE
 LAPPAPHEN-A
 LAPPAPHEN-B
 LAPPAURIC-ACID
 LAURIC-ACID
 LEUCINE 320-1,600 RT USA
 LIGNIN
 LYSINE 670-3,350 RT USA
 MAGNESIUM 3,930-5,370 RT CAL PED
 MANGANESE 55-60 RT CAL PED
 MATAIRESINOL PL 411/
 MERCURY 1.27 RT CAL
 METHIONINE 90-450 RT USA
 METHYL-ARCTATE-B
 MUCILAGE 50,000-120,000 PL PED
 MYRISTIC-ACID PL PED
 NIACIN 3-15 RT JAD USA
 PALMITIC-ACID
 PETASITALONE LF 411/
 PHENYLALANINE 330-1,650 RT USA
 PHOSPHORUS 510-4,370 RT JAD PED
 USA
 PHYTOSTEROLS RT HHB
 POLYACETYLENE
 POTASSIUM 3,080-16,800 RT JAD PED
 USA
 PROLINE 520-2,600 RT USA
 PROPIONIC-ACID PL PED
 5'-(1-PROPYNYL)-2,2'-BITHIENYL-5-YL...
 PROTEIN 15,000-120,000 RT HHB JAD
 USA
 RIBOFLAVIN 1-3.4 RT JAD PED USA
 SELENIUM 14 RT PED
 SERINE 250-1,250 RT USA
 SESQUILIGNANS PL JSG
 SILICON 225 RT PED

SITOSTEROL
 SODIUM 50-1,520 RT JAD PED USA
 STEARIC-ACID
 STIGMASTEROL
 TARAXASTEROL
 3,5,7,9-TETRAYNE PL PED
 THIAMIN 1-11 RT JAD USA
 THREONINE 260-1,300 RT USA
 TIGLIC-ACID
 TIN 21 RT PED
 TRACHELOGENIN
 1,11-TRIDECADIENE PL PED
 1,11-TRIDECADIENE-3,5,7,9-TETRAYNE
 (4E,6E,12E)-4,6,12-TETRADECADIEN-
 8,10,12-TRIYN-1,3-DIYL-DIAC
 (4E,6Z,12E)-4,6,12-TETRADECADIEN-
 8,10,12-TRIYN-1,3-DIYL-DIAC
 (4E,6E)-4,6-TETRADECADIEN-8,10,12-
 TRIYN-1,3-DIYL-DIACETATE
 (4E,6Z)-4,6-TETRADECADIEN-8,10,12-
 TRIYN-1,3-DIYL-DIACETATE
 1,3,1,1-TRIDECATRIENE PL PED
 5,7,9-TRIYNE PL PED
 TRYPTOPHAN 60-300 RT USA
 TYROSINE 180-900 RT USA
 VALINE 330-1,650 RT USA
 WATER 740,000-860,000 RT JAD USA
 ZINC 22-39 RT CAL PED

ARCTOSTAPHYLOS UVA-URSI
 (L.) SPRENGEL

“BEARBERRY”

ALLANTOIN PL PED
 ALUMINUM 719 LF PED
 ALPHA-AMYRIN PL JSG
 ARBUTIN 50,000-120,000 LF HHB
 ASCORBIC-ACID 191 LF PED
 ASH 50,000 LF PED
 ASH 6,000-33,000 SD CRC
 BETULINIC-ACID PL JSG
 CALCIUM 10,900 LF PED
 CARBOHYDRATES 814,000 LF PED
 BETA-CAROTENE 172 LF PED
 CHROMIUM 12 LF PED
 CITRIC-ACID LF HHB
 COBALT 17 LF PED
 ELLAGIC-ACID LF HHB
 FAT 26,000 LF PED
 FAT 20,000-500,000 SD CRC
 FIBER 121,000 LF PED
 FORMIC-ACID LF HHB
 GALLIC-ACID PL PED

GALLOTANNINS LF HHB
 HEXA-O-GALLOYL-BETA-D-GLUCOSE
 LF HHB
 HYDROQUINONES 3,000-5,000 LF HHB
 HYDROQUINONE-GLYCOSIDES 50,000-
 180,000 LF PED
 HYPERIN LF HHB
 IRON 1,050 LF PED
 ISOQUERCITRIN LF HHB
 KILOCALORIES 2,710 LF PED
 LUPEOL PL JSG
 MAGNESIUM 1,210 LF PED
 MALIC-ACID LF HHB
 MANGANESE 165 LF PED
 METHYL-ARBUTIN LF PED
 MONOTROPEIN LF 411/
 MYRICETIN LF HHB
 NIACIN 12 LF PED
 OLEANOLIC-ACID PL JSG
 PENTA-O-GALLOYL-BETA-D-GLUCOSE
 LF HHB
 PHOSPHORUS 370 LF PED
 POTASSIUM 3,830 LF PED
 PROTEIN 111,000 LF PED
 PROTEIN 25,000-256,000 SD CRC
 O-PROTocatechuic-ACID LF HHB
 QUERCETIN LF PED
 QUERCITRIN LF 411/
 QUINIC-ACID LF HHB
 RIBOFLAVIN 0 LF PED
 SELENIUM 16 LF PED
 SILICON 70 LF PED
 BETA-SITOSTEROL PL JSG
 SODIUM 60 LF PED
 TANNIN 60,000-200,000 PL HHB PED
 TARAXASTEROL PL JSG
 THIAMIN 1 LF PED
 TIN TR LF PED
 UNEDOSIDE RT 411/
 URSOLIC-ACID 4,000-7,500 LF HHB
 UVAOL PL JSG
 WATER 884,000 LF PED
 ZINC TR LF PED

ARDISIA JAPONICA L.

“MARLBERRY”

ARDISIN PL CCO
 ARDISINOL-I PL CCO
 ARDISINOL-II PL CCO
 BERGENIN PL CCO
 EMBELIN RH CCO
 EO 1,000-2,000 PL CCO

2-HYDROXY-5-METHOXY-3-
PENTADECENYL-BENZOQUINONE FR
CCO
ILEXOL LF CCO
MYRICITRIN LF CCO
QUERCETIN PL CCO
QUERCITRIN LF CCO
RAPANONE RH CCO

ARECA CATECHU L.

“BETEL NUT; PIN-LANG”

ALKALOIDS 3,000-6,000 SD CCO
ARECAIDINE SD CCO
ARECAINE SD 411/
ARECA-RED 60,000-160,000 SD HHB
ARECOLIDINE SD CCO
ARECOLINE 1,000 SD WOI
ASCORBIC-ACID 0 SD CRC
ASH 15,000 SD CRC
ASH 10,000 SP CRC
CALCIUM 500-1,050 SD CAL WOI
CALCIUM 60 SP CRC
CAPRIC-ACID SD CCO
CARBOHYDRATES 472,000-791,000 SD
CRC WOI
CARBOHYDRATES 90,000-662,000 SP
CRC
BETA-CAROTENE 0 SD CRC
D-CATECHIN SD CCO
CELLULOSE 476,000 HU WOI
CHOLINE SD CCO
COPPER 15 SD CAL
DIOSGENIN SD CCO
FAT 44,000-180,000 SD CCO HHB WOI
FAT 3,000-23,000 SH CRC
FIBER 159,000-181,000 SD CRC
GALACTAN SD HHB
GALLIC-ACID SD HHB
GUVACINE SD CCO
GUVACOLINE SD CCO
HENEICOSANIC-ACID SD HHB
HOMOARECOLINE SD CCO
IRON 15-70 SD CAL WOI
IRON 20-147 SH CRC
ISOGUVACINE SD HHB
KRYPTOGENIN SD CCO
LAURIC-ACID 22,000-90,000 SD CCO
WOI
LEUCOCYANIDINE SD HHB
LEUCOPELARGONIDINE SD HHB
LINOLEIC-ACID SD CCO
MAGNESIUM 500 SD CAL

MANGANESE 67 SD CAL
MANNAN SD HHB
MARGARINIC-ACID SD HHB
MERCURY 0.03 SD CAL
MUCILAGE SD HHB
MYRISTIC-ACID 9,240-30,240 SD CCO
WOI
NIACIN 6-6.8 SD CRC
NONADECANIC-ACID SD CCO
OLEIC-ACID 12,760-41,760 SD CCO WOI
PALMITOLEIC-ACID SD CCO
PHLOBAPHENE-TANNIN SD 411/
PHOSPHORUS 630-1,892 SD CRC WOI
PHOSPHORUS 890 SH CRC
POTASSIUM 4,460-6,700 SD CAL CRC
PROTEIN 49,000-71,325 SD WOI
PROTEIN 33,000-243,000 SP CRC
RESIN SD HHB
RIBOFLAVIN 6.9-7.9 SD CRC
BETA-SITOSTEROL SD CCO
SODIUM 151-867 SD CAL CRC
STEARIC-ACID SD CCO
SUCROSE SD HHB
TANNIN 150,000-250,000 SD CCO HHB
THIAMIN 1.7-1.9 SD CRC
WATER 123,000-313,000 SD CRC WOI
WATER 864,000 SP CRC
ZINC 16 SD CAL

ARGEMONE MEXICANA L.

“PRICKLY POPPY”

ALKALOIDS 1,250 PL HHB
ALPHA-ALLOCRYPTOPINE RT ALK
ARGEMONIC-ACID PL JSG
ARGEMONINE PL JSG
BERBERINE 410 PL MPI
CHELERYTHRINE RT ALK
CODEINE? PL CRC
COPTISINE SD ALK
DIHYDROCHELERYTHRINE RT ALK
DIHYDROSANGUINARINE SH ALK
FAT 200,000-393,000 SD CRC
L-GLUTAMIC-ACID SD CRC
ISORHAMNETIN-3,7-DIGLUCOSIDE FL
CRC
ISORHAMNETIN-3-BETA-D-GLUCOSIDE
FL CRC
LINOLEIC-ACID 96,000-188,600 SD CRC
WOI
MORPHINE? PL ALK
MYRISTIC-ACID SD HHB
NORARGEMONINE FR ALK

OLEIC-ACID 44,000-85,800 SD CRC WOI
 PALMITIC-ACID SD HHB
 PALMITOLIC-ACID 12,000-23,600 SD
 CRC HHB WOI
 PHYSETOLIC-ACID SD HHB
 PROTEIN 176,000-181,000 SD CRC
 PROTOPINE 840 PL MPI
 RESIN 17,500 PL MPI
 RICINOLEIC-ACID 20,000-39,300 SD
 CRC HHB WOI
 ROMNEINE PL CRC
 SANGUINARINE SD ALK
 TANNIN 11,000 PL MPI

***ARGYREIA NERVOSA* (BURM.)
 BOJER**

“SILVER MORNING GLORY”
 “WOOD ROSE”

CHANOCLAVINE SD ALK
 ERGINE SD ALK
 ERGONOVINE SD ALK
 ISOERGINE SD ALK
 LYSERGIC-ACID-AMIDES SD CRC
 PENNICLAVINE SD ALK
 STRYCHNINE? PL CRC

***ARGYREIA SPECIOSA* SWEET.
 “ELEPHANT CREEPER”**

CHANOCLAVINE SD ALK
 EPI-FRIEDELINOL PL JSG
 EPI-FRIEDELINOL-ACETATE PL JSG
 ERGINE SD ALK
 ERGONOVINE SD ALK
 ISOERGINE SD ALK

***ARISAEMA CONSANGUINEUM*
 SCHOTT**

“CHINESE JACK-IN-THE-PULPIT”

ARSENIC 0.17 RH CAL
 BENZOIC-ACID RH CCO
 CALCIUM 1,550 RH CAL
 COPPER 7 RH CAL
 IRON 600 RH CAL
 MAGNESIUM 100 RH CAL
 MANGANESE 4 RH CAL
 D-MANNITOL RH CCO
 POTASSIUM 180 RH CAL
 SAPONIN RH CCO
 SODIUM 112 RH CAL
 ZINC 14 RH CAL

***ARISAEMA TRIPHYLLUM* (L.)
 SCHOTT.**

“JACK-IN-THE-PULPIT”

CALCIUM-OXALATE PL CRC
 FAT 28,000 SD CRC
 LIGNIN PL CRC
 PROTEIN 150,000 SD CRC
 STARCH 100,000-170,000 TU CRC

***ARISTOLOCHIA DEBILIS*
 SIEB. & ZUCC.**

“CHINESE BIRTHWORT”

ALLANTOIN RT CCO
 ARISTOCHINIC-ACID SD CCO
 ARISTOIC-ACID RT CCO
 1(10)-ARISTOLEN-15-AL PL JSG
 ARISTOLOCHIALACTAM RT CCO
 ARISTOLOCHIC-ACID RT SD CCO
 ARISTOLOCHINE PL JSG
 ARISTOLONE RT CCO
 1(10)-ARISTOLONE PL JSG
 ARSENIC 0.21 FR CAL 1/
 CALCIUM 1,740 FR CAL
 COPPER 14 FR CAL
 CYCLANOLINE RT CCO
 DEBILONE PL JSG
 7-HYDROXYARISTOLOCHIC-ACID-A
 CCO
 IRON 190 FR CAL
 MAGNESIUM 1,880 FR CAL
 MANGANESE 33 FR CAL
 7-METHOXYARISTOLOCHIC-ACID-A
 CCO
 3-OXOISHWARANE PL JSG
 POTASSIUM 21,500 FR CAL
 SODIUM 136 FR CAL
 ZINC 40 FR CAL

1/ CAL mineral data may apply to other
 species, esp. *A. contorta*.

***ARISTOLOCHIA SERPENTARIA* L.**

“SERPENTARIA;
 VIRGINIA SNAKEROOT”

ARISTOLACTONE PL CRC
 ARISTOLOCHIC-ACID-I PL CRC
 ARISTOLOCHINE PL CRC
 ARISTORED PL CRC
 BORNEOL PL CRC

EO PL CRC
SERPENTARINE PL CRC

ARMORACIA RUSTICANA P.
GAERTN., MEYER & SCHERB.

“HORSERADISH”

ALLOXURBASEN RT HHB
ALLYL-ISOTHIOCYANATE 400-2,592 RT
GEO HHB
ALUMINUM 4-30 RT AAS
AMYLASE RT HHB
ARGININE RT HHB
ARSENIC 0.01-0.04 RT AAS
ASCORBIC-ACID 220-3,189 RT CRC
ASCORBIC-ACID 1,220-18,200 PL HHB
ASH 14,000-87,000 RT CRC
ASH 200,000 PL HHB
ASPARAGINE RT HHB
BIOSIDE LF JAD
BORON 6-27 RT AAS
BROMINE 5-19 RT AAS
BUTYLISOTHIOCYANATE 188-2,867 PL
HHB
D-2-BUTYLISOTHIOCYANATE SD HHB
CADMIUM 0.08-0.5 RT AAS
CALCIUM 240-5,512 RT CRC
CARBOHYDRATES 155,000-783,000 RT
CRC
CHROMIUM 0.02-0.15 RT AAS
COBALT 0.005-0.08 RT AAS
COPPER 2-9 RT AAS
EO 200-3,050 PL HHB
EO 1,460-2,160 RT GEO
FAT 2,000-12,000 RT CRC
FIBER 14,000-94,000 RT CRC
FLUORINE <0.1 RT AAS
FRUCTOSE RT HHB
GENTISIC-ACID 15 RT CRC(FSN)
GLUCOCOCHLEARIN SD HHB
GLUCOCONRINGIIN SD HHB
GLUCOPUTRANJIVIN SD HHB
GLUCOSE RT HHB
3-O-BETA-D-GLUCOSYL-BETA-D-
KAEMPFEROL-XYLOSIDE LF ABS
3-O-BETA-D-GLUCOSYL-BETA-D-
QUERCETIN-XYLOSIDE LF ABS
P-HYDROXY-BENZOIC-ACID 14 RT
CRC(FSN)
INVERSTASE RT HHB
IRON 12-106 RT AAS CRC
ISOPROPYLISOTHIOCYANATE PL HHB
KAEMPFEROL LF ABS

3-O-BETA-D-KAEMPFEROL-GLUCOSIDE
LF ABS
LEAD 0.02-0.15 RT AAS
LIMONENE PL HHB
LIPASE RT HHB
MAGNESIUM 420-1,690 RT AAS
MANGANESE 4-19 RT AAS
MERCURY <0.001 RT AAS
MOLYBDENUM <0.1 RT AAS
MYROSIN RT WOI
NIACIN 4-20 RT CRC
NICKEL 0.2-1.2 RT AAS
NITROGEN 8,600-38,461 RT AAS
PECTIN RT HHB
PEROXIDASE RT HHB
PHENYLETHYL-ISOTHIOCYANATE
292-540 RT GEO
PHENYLPROPYL-ISOTHIOCYANATE
RT GEO
PHOSPHATASE RT HHB
PHOSPHORUS 640-5,000 RT AAS CRC
POTASSIUM 5,640-31,150 RT AAS CRC
PROTEASE RT HHB
PROTEIN 27,000-136,000 RT CRC
QUERCETIN LF ABS
3-O-BETA-D-QUERCETIN-GLUCOSIDE
LF ABS
RAPHANIN PL HHB
RIBOFLAVIN 1-4 RT CRC
RUBIDIUM 0.9-4.6 RT AAS
RUTOSIDE LF JAD
SELENIUM 0.001-0.01 RT AAS
SILICON 5-19 RT AAS
SINAPIC-ACID PL JLS58:125
SINAPIN SD HHB
SINIGRIN RT WOI MUTAGENIC JAD
SODIUM 80-315 RT CRC
SULFUR 1,800-10,000 RT AAS
TANNIN PL HHB
THIAMIN 0-3 RT CRC
VANILLIC-ACID 45 RT CRC(FSN)
WATER 740,000-802,000 RT AAS CRC
ZINC 13-54 RT AAS

AAS=ACTA AGRIC SCAN SUPPL 22.
1890 H2O=74%; ZMB=3.85 X APB

ARNICA MONTANA L.

“LEOPARD’S-BANE”

“MOUNTAIN TOBACCO”

ANGELIC-ACID RH HHB
ARBICIN RT
ARNICOLIDE LF HHB

ARNIDIOL FL HHB
 ARNIFOLIN LF HHB
 ARNISTEROL FL HHB
 ASTRAGALIN FL HHB
 BALDRIANIC-ACID RH HHB
 BETAINE FL HHB
 BETULETOL FL 411/
 CAFFEIC-ACID FL HHB
 CARNAUBYLALCOHOL FL HHB
 CATECHIN-TANNINS 23,000 RH HHB
 CHLOROGENIC-ACID FL HHB
 CHOLINE FL HHB
 8,9-DEHYDRO-4-HYDROXY-THYMOL-
 DIMETHYL-ETHER RH HHB
 DIEN-TETRAIN FL HHB
 DIHYDROHELENALIN PL CRC
 DIOXYSTEARIC-ACID FL HHB
 EN-PENTAIN FL HHB
 EO 400-1,400 FL HHB
 EO 5,000-63,100 RH HHB
 EO 17,700-37,400 RT HHB
 2-BETA-ETHOXY-6-O-ISOBUTYRYL-2,3-
 DIHYDROHELENALIN FL 411/
 EUPAFOLIN FL 411/
 FARADIOL FL HHB
 FORMIC-ACID RH HHB
 FRUCTOSE 25,000 RH HHB
 FUMARIC-ACID RH HHB
 GALLIC-ACID FL HHB
 HELENALIN PL CRC
 HELENIEN FL HHB
 HEPTADECATRIEN-(1,7,9)-TRIIN-
 (11,13,15) FL HHB
 HISPIDULIN FL 411/
 4-HYDROXY-THYMOL-DIMETHYL-
 ETHER RH HHB
 INULIN FL HHB
 INULIN 90,000-120,000 RH HHB
 ISOBUTYRIC-ACID RH HHB
 ISOBUTYRIC-ACIDPHLORYLESTER RH
 HHB
 6-O-ISOBUTYRYL-
 TETRAHYDROHELENALIN FL 411/
 ISOQUERCITRIN FL HHB
 LACINIATIN FL 411/
 LACTIC-ACID RH HHB
 BETA-LACTUCEROL FL HHB
 LAURIC-ACID FL HHB
 LUTEIN FL HHB
 LUTEOLIN FL HHB
 LUTEOLIN-7-O-MONOGLUCOSIDE FL
 HHB
 MALIC-ACID FL HHB
 MUCILAGE RH HHB

PALMITIC-ACID FL HHB
 PATULETIN FL 411/
 PENTAIN-ON FL HHB
 M-PHLOROL-METHYL-ETHER RH HHB
 PHYTOSTEROLS FL HHB
 QUERCETIN-3-GLUCO-GALACURONIDE
 FL HHB
 REDUCING-SUGARS 5,000 RH HHB
 BETA-SITOSTEROL FL HHB
 SPINACETIN FL 411/
 STEARIC-ACID FL HHB
 SUCCINIC-ACID RH HHB
 TARAXASTEROL FL HHB
 SUCROSE 10,000 RH HHB
 THYMOL FL HHB
 THYMOL-METHYL-ETHER FL HHB
 THYMOL-HYDROQUINONE-DIMETHYL-
 ETHER RH HHB
 TRIDECADIEN-(1,11)-TETRAIN-(3,5,7,9)
 FL HHB
 TRIDECAEN-TETRAIN RH HHB
 TRIDECAPENTAIN RH HHB
 TRIDECATRIEN-(1,3,5)-TRIIN-(7,9,11) FL
 HHB
 TRIDECADIEN-(3,5)-TRIIN-(7,9,11)-OL-
 (1)-ACETATE FL HHB
 TRIDECATRIEN-(1,3,5)-TRIIN-(7,9,11) FL
 HHB
 TRIDECEN-(1,)-PENTAIN-(3,5,7,9,11) FL
 HHB
 TRIMETHYLAMINE FL HHB
 XANTHOPHYLL FL HHB
 XANTHOPHYLL-EPOXIDE FL HHB
 ZEAXANTHIN FL HHB

ARRACACIA XANTHORRHIZA **BANCR.**

"ARRACACHA" "PERUVIAN CARROT"

ASCORBIC-ACID 310-1,070 RT PAN
 ASH 9,000-31,150 RT PAN
 CALCIUM 190-655 RT PAN
 CARBOHYDRATES 269,000-930,800 RT
 PAN
 BETA-CAROTENE 1.1-3.8 RT PAN
 FAT 1,000-3,460 RT PAN
 FIBER 6,000-20,760 RT PAN
 IRON 9-31 RT PAN
 KILOCALORIES 1,120-3,875 RT PAN
 NIACIN 36-125 RT PAN
 PHOSPHORUS 550-1,900 RT PAN
 PROTEIN 10,000-34,600 RT PAN

RIBOFLAVIN 0.2-0.7 RT PAN
 STARCH 100,000-250,000 RT NAS
 THIAMIN 0.7-2.4 RT PAN
 WATER 711,000 RT PAN

NAS=Lost Crops of the Incas, HERE

ARTEMISIA ABROTANUM L.

“SOUTHERNWOOD”

ABROTINE 20,000-30,000 PL HHB
 ADENINE PL HHB
 ADENOSINE PL HHB
 ARTEMISITIN PL HHB
 CAFFEIC-ACID PL HHB
 CALYCANTHOSIDE PL HHB
 CHLOROGENIC-ACID PL HHB
 CHOLINE PL HHB
 EO 1,800-21,000 PL HHB
 GUANINE PL HHB
 ISOFRAXIDIN PL HHB
 QUEBRACHITOL PL HHB
 RUTIN PL HHB
 SCOPOLETIN PL HHB
 SCOPOLIN PL HHB
 TANNIN PL HHB
 UMBELLIFERONE PL HHB
 URIC-ACID PL HHB

ARTEMISIA ABSINTHIUM L.

“WORMWOOD”

ABSINTHIN LF 411/
 ANABSINTHIN PL 411/
 ARTABASIN LF 411/
 ACHILLICIN FL
 ANABSIN PL JSG
 ANABSININ PL JSG
 ANABSINTHIN PL 411/
 ARTABIN PL 411/
 ARTENISETIN
 ARABSIN PL 411/
 ARTABASIN LF FNF
 ARTABSINOLIDE PL JSG
 ARTEMETIN 60 LF 411/
 ARTEMOLINS PL JSG
 ARTHAMARIN
 ARTHAMARININ
 ARTHAMARIDIN
 ARTHAMARIDININE
 ASCORBIC-ACID 1,200-2,600 LF
 ASH 66,000 SD
 BISABOLENE PL 411/
 CADINENE PL 411

CAMPHENE PL 411/
 BETA-CAROTENE 500 LF
 BETA-CARYOPHYLLENE
 CHAMAZULENE 1,700 LF
 CHLOROGENIC-ACID PL 411/
 P-COUMARIC-ACID PL 411/
 2,3-DIEPI-ARTABSINOLIDE-C PL JSG
 3,6-DIHYDROCHAMAZULENE EO 411/
 5,6-DIHYDROCHAMAZULENE EO 411/
 3,7-DIOXABICYCL-(3,3,0)-OCTANE
 EO 2,500-17,000 LF
 CIS-EPOXYOCIMENE 800-5,700 LF
 TRANS-EPOXYOCIMENE 800-5,700 LF
 FORMIC-ACID
 5-HYDROXY-3,6,7,3',4'-
 PENTAMETHOXYFLAVONE
 HYDROXYPELENOLIDE PL JSG
 P-HYDROXYPHENYLACETIC-ACID PL
 411/
 INULOBIOSE
 ISOABSINTHIN PL 411/
 ISOQUERCITRIN LF
 ISORHAMNETIN-3-GLUCOSIDE LF
 ISORHAMNETIN-3-O-
 RHAMNOGLUCOSIDE
 KETOPELENOLIDES PL JSG
 LIRIORESINOL PL JSG
 MATRISIN PL 411/
 METHYL-3-(5-PROP-1-YNE-1YL-
 THIENYL-(2)-PROPIONATE
 NICOTINIC-ACID
 PALMITIC-ACID
 FAT 334,000-381,000 LF
 PATULETIN-3-O-GLUCOSIDE 16-32 LF
 PATUELTIN-3-O-RHAMNOSIDE 16-32 LF
 PHELLANDRENE PL 411/
 PINENE PL 411/
 PIPECOLIC-ACID
 PROTEIN 258,000-334,000 SD
 PROTOCATECHUIC-ACID PL 411/
 QUEBRACHITOL
 QUERCITIN-3-O-BETA-D-GLUCOSIDE
 PL 411/
 QUERCITIN-3-O-RHAMNOGLUCOSIDE
 PL 411/
 RUTIN
 SABINENE PL 411/
 TRANS-SAQBINYL-ACETATE PL 411/
 SALICYLIC-ACID
 SPINACETIN-3-O-GLUCOSIDE 80 LF 411/
 SPINACETIN-3-O-RHAMNOGLUCOSIDE
 16-32 LF 411/
 TRANS-SPIROKETALENOL RT 411/
 SYRINGIC-ACID PL 411/

TANNIN 40,000-77,000 LF
 ALPHA-THUJONE 1,750 LF
 BETA-THUJONE 1,750 LF
 THUJYL-ALCOHOL PL 411/
 THUJYL-ISOVALERATE
 THUJYL-PALMITATE
 TRANS-DEHYDROMATRICARIA-ESTER
 RT
 VANILLIC-ACID PL 411/

ARTEMISIA ANNUA L.

“SWEET ANNIE; QINGHAO”

BETA-ARTEANNUAN PL PS75:161
 ARTEANNUIN-A PL JSG
 ARTEANNUIN-B PL JSG
 ARTEMISIA-ALCOHOL
 ARTEMISIA-KETONE 2,200-16,000 LF
 JEO3:33
 ARTEMISIC-ACID PL JSG
 ARTEMISIC-ACID-METHYL-ESTER PL
 FNF
 ARTEMISILACTONE PL JSG
 ARTEMISININ 100-5,000 LF FNF
 ARTEMISININ 100-5,000 FL FNF
 ARTEMISINOL PL FNF
 ARTEMISITINE PL FNF
 ARTEMISYL-ACETATE PL FNF
 BORNEOL PL FNF
 DELTA-CADINENE PL FNF
 CAMPHENE PL FNF
 CAMPHENE-HYDRATE 1,000-2,820 LF
 JEO3:33
 CAMPHOR 1,720-6,460 LF JEO3:33
 CAPILLENE 80 PL FNF
 ALPHA-CARYOPHYLLENE PL FNF
 BETA-CARYOPHYLLENE PL FNF
 GAMMA-CARYOPHYLLENE PL FNF
 CARYOPHYLLENE-OXIDE PL FNF
 1,8-CINEOLE 2,360-6,600 LF JEO3:33
 FNF
 COUMARIN PL FNF
 CUMINALDEHYDE LF FNF
 O-CYMENE ?
 P-CYMENE PL FNF
 DEOXYARTEMISININ PL PS75:163
 3,5-DIHYDROXY-6,7,3',4'-
 TETRAMETHOXYFLAVONE PL JSG
 EO 8,400-23,500 LF JEO3:33
 BETA-FARNESENE PL FNF
 HENTRIACONTANYLTRIACONTANOATE
 PL PS75:163
 HUMULENE PL FNF
 ISOARTEMISIA-ACETATE PL FNF

ISOARTEMISIA-ALCOHOL PL FNF
 ISOARTEMISIA-KETONE 3,400 PL FNF
 MENTHOL
 METHYL-ACETATE
 3-METHYL-PINOCARVONE
 MYRCENOL
 NONACOSANOL PL PS75:161
 OCIMENE
 OCTACOSANOL PL PS75:161
 ALPHA-PINENE 1,345-3,760 LF JEO3:33
 BETA-PINENE
 PINOCARVEOL
 PINOCARVYL-ACETATE
 QUERCETAGETIN-6,7,3',4'-
 TETRAMETHYLETHER PL FNF
 QUERCETAGETIN-6,7,4'-
 TRIMETHYLETHER PL FNF
 QINGHAOSU-IV PL FNF
 SCPOLETIN PL FNF
 BETA-SELINENE
 BETA-SITOSTEROL PL PS75:161
 STIGMASTEROL PL PS75:161
 TERPINEN-4-OL
 6,7,3',4'-TETRA-O-METHYL-
 QUERCETAGETIN LF FNF
 TETRATRIACONTANE PL PS75:163
 3,3,6-TRIMETHYL-HEPTA-1,5-DIEN-4-OL
 YLANGENE PL FNF

ARTEMISIA CAPILLARIS THUNB.

“CAPILLARY WORMWOOD”

ACETYLBORNEOL PL CCO
 AESCULETIN PL CCO
 AESCULETIN-DIMETHYL-ETHER FR LF
 CCO
 AESCULETIN-6,7-DIMETHYL-ETHER PL
 CCO
 ARCAPILLIN PL CCO
 ARSENIC 0.16 PL CAL
 AZULENE EO CCO
 ALPHA-BERGAMOTENE EO CCO
 BETA-BISABOLENE EO CCO
 BUTYRIC-ACID EO CCO
 CAFFEIC-ACID PL CCO
 CALCIUM 15,200 PL CAL
 CAMPHENE EO CCO
 CAPILLANOL EO CCO
 CAPILLARIN EO PL CCO
 CAPILLARISIN PL CCO
 CAPILLARTEMISINS PL JSG
 CAPILLENE EO CCO

CAPILLIN EO CCO
 CAPILLONE EO CCO
 CAPRIC-ACID EO CCO
 CAPROIC-ACID EO CCO
 CAPRYLIC-ACID EO CCO
 CAR-3-ENE PL CCO
 BETA-CARYOPHYLLENE EO CCO
 CHROMONE PL CCO
 1,8-CINEOLE EO CCO
 CIRSILINEOL PL CCO
 CIRSIMARITRIN PL CCO
 ALPHA-COPAENE EO CCO
 BETA-COPAENE
 COPPER 8 PL CAL
 COUMARIN PL CCO
 COPPER 8 PL CAL
 M-CRESOL EO CCO
 O-CRESOL EO CCO
 P-CRESOL EO CCO
 P-CYMENE EO CCO
 P-CYMEN-8-OL EO CCO
 DEHYDROFALCARINOL PL CCO
 DEHYDROFALCARINONE PL CCO
 6-DEMETHOXYCAPILLARISIN PL CCO
 6-DEMETHOXY-4'-
 METHYLCAPILLARISIN PL CCO
 3,5-DIMETHOXYALLYL-BENZENE EO
 CCO
 6,7-DIMETHYLESCULETIN PL CCO
 BETA-ELEMENE EO CCO
 EO 1,000-2,300 PL CCO
 ESCULETIN-6,7-DIMETHYL-ETHER PL
 CCO
 O-ETHYLPHENOL EO CCO
 P-ETHYLPHENOL EO CCO
 EUGENOL EO CCO
 EUPATOLITIN PL CCO
 GENKWANIN PL CCO
 BETA-GURJUNENE EO CCO
 HEPTANOIC-ACID EO CCO
 ALPHA-HUMULENE EO CCO
 IRON 200 PL CAL
 LAURIC-ACID EO CCO
 LINOLEIC-ACID EO CCO
 MAGNESIUM 1,000 PL CAL
 MANGANESE 37 PL CAL
 MERCURY 0.05 PL CAL
 1-(2'-METHOXYPHENYL)-2,4-
 HEXADIYNE EO CCO
 4'-METHYLCAPILLARISIN PL CCO
 7-METHYLCAPILLARISIN PL CCO
 METHYLEUGENOL PL CCO
 MYRCENE EO CCO
 MYRISTIC-ACID EO CCO

NEOCAPILLENE RT CCO
 NONANOIC-ACID EO CCO
 NORCAPILLENE 10 PL CCO
 OLEIC-ACID EO CCO
 PALMITIC-ACID EO CCO
 PENTADECANOIC-ACID EO CCO
 PHENOL EO CCO
 5-PHENYL-1,3-PENTADIYNE LF RT SD
 ST CCO
 ALPHA-PINENE EO CCO
 BETA-PINENE EO CCO
 POTASSIUM 22,000 PL CAL
 RHAMNOCITRIN PL CCO
 SABINENE EO CCO
 SCOPOLETIN BD CCO
 SODIUM 1,010 PL CAL
 STEARIC-ACID EO CCO
 ALPHA-TERPINENE EO CCO
 GAMMA-TERPINENE EO CCO
 ALPHA-TERPINEOL EO CCO
 TERPINOLENE EO CCO
 TRIDECANOIC-ACID EO CCO
 UNDECANOIC-ACID EO CCO
 ZINC 22 PL CAL

ARTEMISIA CINA BERG.

"LEVANT WORMSEED"

ARTEMISIN FL BD CCO
 BETAINE FL HHB
 CARVACROL FL 411/
 CHOLINE FL HHB
 CINEOLE FL BD GEO
 1,8-CINEOLE 8,000-24,000 FL HHB
 EO 20,000-30,000 FL BD GEO
 ALPHA-HYDROXYSAANTONIN FL 411/
 LECITHIN FL HHB
 DL-ALPHA-PINENE FL BD GEO
 ALPHA-SANTONIN 10,000-70,000 FL
 HHB
 L-ALPHA-SANTONIN 400-4,200 FL BD
 411/
 TANNIN FL HHB
 TERPINENE FL BD GEO
 ALPHA-TERPINENOL FL 411/
 L-ALPHA-TERPINEOL FL BD GEO
 ZINC

ARTEMISIA DRACUNCULUS L.

"TARRAGON"

AESCULETIDIN-DIMETHYL-ETHER PL
 NAP

- AESCULETIN PL NAP
 ALANINE PL PAS
 ALLOOCIMENE SH NAP
 CIS-ALLOOCIMENE SH NAP
 TRANS-ALLOOCIMENE SH NAP
 ANETHOLE PL PAS
 TRANS-ANETHOLE 100-10,000 SH BML
 NAP
 ANISALDEHYDE EO NAP
 ANISIC-ACID 8-80 SH NAP 2/
 ANISIC-ALCOHOL SH NAP
 ANISOLE 10-100 SH NAP 2/
 APIGENIN PL PAS
 ARGININE LF NAP
 ARTEMIDIN PL NAP
 ARTEMEDINAL SH NAP
 ARTEMEDINOL RT NAP
 ARTEMIDIOL RT NAP
 ARTEMISIAKETONE 50-500 LF NAP 2/
 ARTIMIDINAL SH NAP
 (E)-ARTEMIDIN PL JSG
 (Z)-ARTEMIDIN PL JSG
 ARTEMIDINOL PL JSG
 ARTIMIDINE SH NAP
 ASCORBIC-ACID 588 LF NAP
 ASPARAGINE LF NAP
 ASPARTIC-ACID LF NAP
 ATEMITIN SH NAP
 BENZYL-DIACETYLENE RT NAP
 BIOQUERCETIN SH NAP
 1-(BUT-2-YNYL)-ISOCOUMARIN 270 RT
 NAP
 3-(BUT-TRANS-1-YNYL)-5-HYDROXY-
 ISOCOUMARIN 50 RT NAP
 3-(BUT-TRANS-1-YNYL)-8-HYDROXY-
 ISOCOUMARIN 15 RT NAP
 3-(BUT-CIS-1-YNYL)-ISOCOUMARIN
 1,500 RT NAP
 3-(BUT-TRANS-1-YNYL)-ISOCOUMARIN
 100 RT NAP
 BUTYRIC-ACID
 CAFFEIC-ACID 7,640 SH NAP
 CALCIUM 11,390-12,340 PL CRC
 CAMPHENE LF NAP
 CAMPHOR 20-200 SH NAP
 CAPILLARIN 920 SH NAP
 CAPILLENE SH NAP
 CAPILLIN RT NAP
 CARBOHYDRATES 502,000-544,000 PL
 CRC
 CAR-3-ENE SH NAP
 CAR-4-ENE SH NAP
 BETA-CAROTENE 2-74 LF CRC NAP
 CARVONE PL PAS
 ALPHA-CEDRENE PL PAS
 CHAVICOL-METHYL-ETHER SH NAP
 CHLOROGENIC-ACID SH NAP
 CHRYSOERIOL PL PAS
 1,8-CINEOLE 50-500 SH NAP
 CINNAMIC-ACID-ACETATE SH NAP
 CINNAMIC-ACID-ETHYL-ESTER PL
 PAS
 CIRSILINEOL PL PAS
 CIRSIMARITRIN PL PAS
 CITRAL PL PAS
 COPPER 7 PL USA
 COSTUNOLIDE PL PAS
 P-COUMARIC-ACID PL PAS
 COUMARIN PL PAS
 O-CRESOL PL PAS
 P-CRESOL PL PAS
 CYCLOHEXENONE SH NAP
 P-CYMENE SH NAP
 DEHYDROFALCARINDIOL RT NAP
 DEHYDROFALCARINOL 100 RT NAP
 DEHYDROFALCARINONOL RT NAP
 DIACETYLEN SH NAP
 DIHYDROCOUMARIN PL PAS
 3',5'-DIHYDROXY-4',7-DIMETHOXY-
 FLAVANONE 16 SH NAP
 (E)-2-DIHYDROXY-4-METHOXY-4-
 METHOXYCINNAMIC-ACID-METHYL-
 ETHER
 1,2-DIMETHOXY-4-ALLYL-BENZENE
 SH NAP
 DI-O-CAFFELOYL-QUINIC-ACID PL PAS
 DIPHENYL-GLYOXAL SH NAP
 ELEMICINE 227-2,770 SH BML NAP
 EO 1,000-10,000
 ESCULETIN-DIMETHYL-ETHER
 ESTRAGOLE 100-7,763 SH BML GEO
 NAP
 EUGENOL SH NAP
 EUGENOL-METHYL-ETHER SH NAP
 FAT 381,000 SD CRC
 FAT 72,000-78,000 SH CRC
 FERULIC-ACID 38 LF NAP
 FIBER 74,000-80,000 PL CRC
 FRUCTOSE LF NAP
 GABA SH NAP
 GALLIC-ACID PL PAS
 GENTISIC-ACID 150 LF NAP
 GERANIOL SH NAP
 GLUTAMIC-ACID SH NAP
 GLUTAMINE SH NAP
 GLUCOSE LF NAP

GLYCINE SH NAP
 N-HENTRIACONTANE SH NAP
 2-HEPTANONE
 HERNIARIN LF NAP
 HISPIDULIN PL PAS
 P-HYDROXYBENZOIC-ACID 14 LF NAP
 P-HYDROXYCOUMARIC-ACID 4 LF
 NAP
 2-HYDROXY-4-METHOXY-TRANS-
 CINNAMIC-ACID 143 LF NAP
 HYPEROSIDE SH NAP
 INULOBIOSE RT NAP
 IRON 320-350 PL CRC
 TRANS-ISOELEMICINE SH NAP
 ISOEUGENOL PL PAS
 ISOFRAXIDIN SH NAP
 ISORHAMNETIN 7 PL PAS
 ISOTHUJONE 20-200 SH NAP
 ISOVITEXIN PL PAS
 KAEMPFEROL-3-O-
 RHAMNOGLUCOSIDE PL ABS1/
 KILOCALORIES 2,950 SH CRC
 LEUCINE SH NAP
 LIMONENE SH NAP
 LINALOOL SH NAP
 LINOLENIC-ACID PL PAS
 LUTEOLIN PL PAS
 LUTEOLIN-7-O-BETA-D-GLUCOSIDE PL
 PAS
 LYSINE SH NAP
 MAGNESIUM 3,470
 MALTOSE 1,490-4,000 LF USA
 MANGANESE 80 PL USA
 P-MENTHA-1,8-DIENE SH NAP
 MENTHOL 50-500 SH NAP
 MENTHONE SH NAP
 4-METHOXYCINNAMALDEHYDE
 P-METHOXYCINNAMALDEHYDE 45-
 450 SD NAP
 P-METHOXYCINNAMALDEHYDE 5-450
 SH NAP
 P-METHOXYCINNAMYL-ALCOHOL SH
 NAP
 METHYL-AMYL-KETONE SH NAP
 METHYL-CHAVICOL 172-7,000 PL
 TRANS-METHYL-ETHER-ISOEUGENOL
 SH NAP
 METHYL-EUGENOL 290-2,900 PL
 METHYL-ISOEUGENOL SH NAP
 MYRCENE 80-1,000 SH NAP
 BETA-MYRCENE SH NAP
 NARINGENIN 44 SH NAP
 NEROL 670-6,700 SH NAP
 NIACIN 90 PL USA
 CIS-OCIMENE SH NAP
 TRANS-OCIMENE SH NAP
 OLEIC-ACID PL PAS
 PATULETIN-3-O-GLUCOSIDE PL ABS1/
 PATULETIN-3-O-RHAMNOGLUCOSIDE
 120 PL ABS1/
 PECTOLINARIGENIN PL PAS
 PEROXIDASE LF NAP
 ALPHA-PHELLANDRENE
 PHENOL PL PAS
 PHENOLASE PL NAP
 PHLOROGLUCINOL PL PAS
 PHOSPHORUS 3,130-3,391 PL CRC
 PHYTOSTEROLS 89 PL USA
 ALPHA-PINENE 100-1,000 SH NAP
 BETA-PINENE SH NAP
 L-PINITOL LF NAP
 POLYPHENOLOXIDASE LF NAP
 POTASSIUM 30,020-32,719 PL CRC
 PROLINE LF NAP
 PROTEIN 315,000 SD CRC
 PROTEIN 228,000-247,000 SH CRC
 PROTEIN 228,000-247,009 PL
 ALPHA-PROSTAGLANDIN-F2 PL PAS
 PROTOCATECHUIC-ACID 3 LF NAP
 QUERCETIN SH NAP
 QUERCETIN-3-(D-
 GALACTOFURANOSYL-6-BETA-L-
 RHAMNOPYRANOSIDE SH NAP
 QUERCETIN-3-(D-GLUCOFURANOSYL-
 6-BETA-L-RHAMNOPYRANOSIDE SH
 NAP
 QUERCETIN-3-O-BETA-D-GLUCOSIDE
 PL PAS
 QUERCETIN-3-GLYCO-GALACTOSIDE
 QUERCETIN-3-METHYL-ETHER PL PAS
 RHAMNETIN PL PAS
 RHAMNOSE LF NAP
 RIBOFLAVIN 13-14 PL USA
 RIBOSE LF NAP
 ROSMARINIC-ACID PL PAS
 RUTIN 100-560 SH ABS1/ NAP
 SABINENE 370-3,700 SH NAP
 SALICYLIC-ACID 3 LF NAP
 SCOPARIN LF NAP
 SCOPARONE 8 SH NAP
 SCOPOLETIN SH NAP
 SERINE SH NAP
 SINAPIC-ACID PL PAS
 BETA-SITOSTEROL PL PAS
 SODIUM 620 PL
 SPATHULENOL SH NAP

SQUALENE PL PAS
 STIGMASTEROL PL PAS
 SUCROSE LF NAP
 SYRINGIC-ACID 8 LS NAP
 TANNIN
 THIAMIN 2-3 PL CRC USA
 THUJONE 60-600 SH NAP
 3,4',5'-TRIHIDROXY-3',7'-DIMETHOXY-
 FLAVANONE 312 SH NAP
 3,4',5'-TRIHIDROXY-7-METHOXY-
 FLAVANONE 250 SH NAP
 TYROSINE SH NAP
 UMBELLIFERONE PL PAS
 VALINE LF NAP
 VANILLIC-ACID 18 LF NAP
 XYLOSE LF NAP
 ZINC

abs1/Zeits.Lebensmitt.Unters. &Forsch.
 174(3);211.1982 2/NAP % MULTIPLIED
 BY EO (1,000-10,000) TO CALCULATE
 PPM'S

ARTEMISIA HERBA-ALBA ASSO.

"DESERT WORMWOOD"

AROMADENDRENE PL RIZ
 ARTEINCULTONE PL RIZ
 ARTEMETIN PL RIZ
 ARTEMISIA-ALCOHOL 145 PL RIZ
 BETA-BISABOLENE PL RIZ
 BORNEOL 319 PL ABS3/
 BORNYL-ACETATE PL RIZ
 CADALENE PL RIZ
 GAMMA-CADINENE PL RIZ
 CALACORENE PL RIZ
 CALAMENENE PL RIZ
 CAMPHOR 580-773 PL RIZ
 CELLULOSE 244,300 PL ABS1/
 CHRYSANTHEMYL-ACETATE 899 PL
 ABS3/
 CHRYSANTHENOL PL ABS3/
 1,8-CINEOLE PL ABS3/
 CINEOLE 194 PL RIZ
 ALPHA-COPAENE PL RIZ
 COPPER 7-14 PL ABS1/
 CUMINALDEHYDE PL RIZ
 ALPHA-CURCUMENE PL RIZ
 P-CYMENE PL RIZ
 DEACETYLHERBOLIDE-A PL RIZ
 DIHYDROREYNOSIN PL RIZ
 DIHYDROSANTAMARIN PL RIZ

DIHYDROXYGERMACRANDIENOLIDE
 PL JNP
 3-BETA,8-ALPHA-DIHYDROXY-4(15),9-
 GERMACRANDIEN-12,6-OLIDE PL JNP
 3-BETA,8-ALPHA-DIHYDROXY-6-
 ALPHAH,7H,11BETAH-
 GERMACRANDIEN-5(14)...
 5,4'-DIHYDROXY-6,7,3'-TRIMETHOXY-
 FLAVONE PL RIZ
 GAMMA-ELEMENE PL RIZ
 N-EICOSANE PL RIZ
 EO 2,900 PL RIZ
 11-ALPHA-H-GALLICIN PL RIZ
 ALPHA-GUAIENE PL RIZ
 BETA-GUAIENE PL RIZ
 N-HEPTADECANE PL RIZ
 HERBOLIDE-A PL RIZ
 HERBOLIDE-B PL RIZ
 HERBOLIDE-C PL RIZ
 HERBOLIDE-D PL RIZ
 HERBOLIDE-E PL ABS2/
 HERBOLIDE-F PL ABS2/
 HERBOLIDE-G PL ABS2/
 HERBOLIDE-H PL ABS2/
 HERBOLIDE-I PL ABS2/
 IRON 710-820 PL ABS1/
 ISOSCHAFTOSIDE PL RIZ
 ISOVITEXIN PL RIZ
 LYRATOL 348 PL RIZ
 MAGNESIUM 2,060 PL ABS1/
 1-METHYL-4-ISOPROPYLBENZENE PL
 RIZ
 MYRTENAL PL RIZ
 N-OCTADECANE PL RIZ
 PATULETIN-3-GLUCOSIDE PL RIZ
 PATULETIN-3-RUTINOSIDE PL RIZ
 PHOSPHORUS 1,790 PL ABS1/
 ALPHA-PINENE PL RIZ
 BETA-PINENE PL RIZ
 TRANS-PINOCARVEOL PL RIZ
 POTASSIUM 12,400 PL ABS1/
 QUERCETIN-3-GLUCOSIDE PL RIZ
 QUERCETIN-3-RUTINOSIDE
 SABINENE PL RIZ
 SANTOLINA-ALCOHOL 290 PL RIZ
 SANTONIN PL RIZ
 SCHAFTOSIDE PL RIZ
 BETA-SITOSTEROL PL RIZ
 SODIUM 250 PL ABS1/
 STIGMASTEROL PL RIZ
 1-TERPINEN-4-OL PL RIZ
 ALPHA-THUJONE 580-773 PL RIZ
 BETA-THUJONE 580-773 PL RIZ

THYMOL PL RIZ
 TORRENTIN PL RIZ
 2,6,10-TRIMETHYL-CIS-7,10-OXIDO-
 DODECA-3E,11-DIEN-2-OL-5-ONE
 VICENIN-2 PL RIZ
 YOMOGI-ALCOHOL 174 PL RIZ
 ZINC 10-21 PL ABS1/

Abs1/=Rev.Elev.Med.vet.Pays Trop
 27(2):203-6.1974
 abs2/=PC24(6):1381.1985
 abs3/=IJCDR25(2):89.1987.

ARTEMISIA MARITIMA L.
 "SEA WORMWOOD"

ARTEMIN PL JSG
 ARTEMISIN BD CCO
 DAVANONE PL JSG
 FAT 220,000 SD CRC
 HYDROXYDAVANONE PL JSG
 IBETA-HYDROXY-
 6BETA,7ALPHA,11BETAH-SELEN-4-
 EN-6,12-OLIDE PL JSG
 MARITIMIN PL JSG
 PROTEIN 438,000 SD CRC
 SANTONIN 2,000 PL HHB
 L-ALPHA-SANTONIN BD CCO

ARTEMISIA PALLENS WALL.
 "DAVANA"

2-ACETYL-5-METHYL-FURAN PL ABS1/
 5-ACETYL-2-METHYL-2-VINYL-
 TETRAHYDROFURAN PL ABS1/
 ALCOHOLS (15% EO) BML
 ALLOAROMADENDRENE 6-29 PL ABS1/
 AROMADENDRENE 3-13 PL ABS1/
 ARTEMONE PL BML
 BICYCLOELEMENE 4-17 PL ABS1/
 BICYCLOGERMACRENE 78-348 PL
 ABS1/
 CADINENE PL BML
 T-CADINOL 38-168 PL ABS1/
 CARYOPHYLLENE PL BML
 CINNAMYL-CINNAMATE PL BML
 BETA-CUBEENE 3-12 PL ABS1/
 DAVANA-ACID PL ABS1/
 DAVANA-ETHER PL ABS1/
 CIS-(ERYTHRO)-DAVANAFURAN 1-6
 PL BML
 CIS-(THREO)-DAVANAFURAN 8-35 PL
 BML

DAVANAFURANS 10-46 PL BML
 DAVANONE PL BML
 DEHYDRO-ALPHA-LINALOOL PL BML
 2,5-DIVINYL-2-METHYL-TETRAHYDRO-
 FURAN PL ABS1/
 EO 1,300-5,800 PL GEO
 ESTERS (65% EO) BML
 ETHANOL PL ABS1/
 BETA-EUDESOL 26-116 PL ABS1/
 FENCHYL-ALCOHOL
 ALPHA-GURJUNENE PL ABS1/
 HYDROCARBONS (20% EO) BML
 ISODAVANONE PL BML
 LAVENDER-LACTONE 39-174 PL ABS1/
 LEDENE PL ABS1/
 LILAC-ALCOHOL PL ABS1/
 LILAC-ALDEHYDE PL ABS1/
 LINALOOL 4-17 PL ABS1/
 CIS-LINALOOL-OXIDE PL ABS1/
 TRANS-LINALOOL-OXIDE PL ABS1/
 BETA-MAALIENE 3-12 PL ABS1/
 2-METHYL-2-VINYL-5-ETHYL-TETRA-
 HYDROFURAN PL ABS1/
 NORDAVANOL PL BML
 SPATHULENOL 44-197 PL ABS1/
 TERPINEN-4-OL PL BML
 TRANS-(ERYTHRO)-DAVANAFURAN
 1-2 PL BML
 TRANS-(THREO)-DAVANAFURAN 1-6
 PL BML

abs/1=Prog.in Ess.Oil Res., ed. E.J. Brunke,
 1986.

ARTEMISIA VULGARIS L.
 "MUGWORT"

ADENINE PL DAA
 ALPHA-AMYRIN PL HHB
 ALPHA-AMYRIN-ACETATE PL JSG
 ARSENIC ND PL CPB38:2205
 ARTEMISIKETONE RT HHB
 ASCORBIC-ACID 720-5,670 LF CRC
 ASH 22,000-173,220 LF CRC
 BARIUM 27-50 PL CPB38:2205
 BORNEOL PL 411/
 BROMINE 12-38 PL CPB38:2205
 CADINENOL PL 411/
 ALPHA-CADINOL PL 411/
 BETA-CADINOL PL 411/
 GAMMA-CADINOL PL 411/
 CALCIUM 820-6,455 LF CRC
 CALCIUM 8,000-11,000 PL CPB38:2205

CALCIUM 8,600 SH CRC
 CARBOHYDRATES 45,000-354,330 LF CRC
 BETA-CAROTENE 21-168 LF CRC
 CHOLINE LF CCO
 CHLORINE 7,900-11,000 PL CPB38:2205
 CHROMIUM 11-22 PL CPB38:2205
 1,8-CINEOLE PL HHB
 COPPER 18-20 PL CPB38:2205
 CIS-DEHYDROMATRICARIA-ESTER 8.5-13.3 RT CCO
 CIS-DEHYDROMATRICARIA-ESTER TR FL CCO
 TRANS-DEHYDROMATRICARIA-ESTER 1.4 RT CCO
 5,3'-DIHYDROXY-3,7,4'-TRIMETHOXYFLAVONE PL 411/
 EO 260-2,000 PL GEO HHB WOI
 EO 1,000 RT HHB
 FAT 8,000-63,000 LF CRC
 FERNENOL PL HHB
 FIBER 34,000-267,700 LF CRC
 HEPTADECA-1,7,9-TRIENE-11,13,15-TRIYNE 10.9 FL CCO
 3-BETA-HYDROXYURS-12-EN-27,28-DIONIC-ACID PL 411/
 INULIN 100,000 RT HHB
 IODINE ND PL CPB38:2205
 IRON 15-118 LF CRC
 IRON 1,200-3,900 PL CPB38:2205
 KILOCALORIES 350-2,755 LF CRC
 LEAD ND PL CPB38:2205
 LINALOOL PL 411/
 LINALYL-ACETATE PL 411/
 MUUROLLOL PL 411/
 MYRCENE PL 411/
 NEROL PL 411/
 NERYL-ACETATE PL 411/
 MAGNESIUM 2,700 SH CRC
 MANGANESE 160-170 PL CPB38:2205
 7,8-METHYLENEDIOXY-9-METHOXYCOUMARIN PL 411/
 MOLYBDENUM ND PL CPB38:2205
 NIACIN 30-235 LF CRC
 NICKEL ND PL CPB38:2205
 PHOSPHORUS 400-3,150 LF CRC
 PHOSPHORUS 270-700 PL CPB38:2205
 PHOSPHORUS 1,900 SH CRC
 ALPHA-PINENE PL HHB
 BETA-PINENE PL HHB
 POTASSIUM 31,400-41,000 PL CPB38:2205

POTASSIUM 22,000 SH CRC
 PROTEIN 52,000-409,450 LF CRC
 PROTEIN 114,000 SH CRC
 QUEBRACHITOL PL HHB
 QUERCETIN-3-GLUCOSIDE PL 411/
 QUERCETIN-3-RHAMNOGLUCOSIDE PL 411/
 RIBOFLAVIN 1.6-13 LF CRC
 RUBIDIUM 19 PL CPB38:2205
 BETA-SITOSTEROL PL HHB
 SPATHULENOL PL 411/
 STIGMASTEROL PL HHB
 STRONTIUM 28-50 PL CPB38:2205
 SULFUR 2,300-2,800 PL CPB38:2205
 TAUREMISIN PL DAA
 TETRACOSANOL PL HHB
 TETRADECA-4,6-DIENE-8,10,12-TRIYNE-1-OL 1.2 RT CCO
 TETRADECA-6-ENE-8,10,12-TRIYNE-3-ONE 17.4 RT CCO
 TETRADEC-6-EN-8,10,12-TRIYNE-1-ONE RT CCO
 THIAMIN 1.5-12 LF CRC
 ALPHA-THUJONE PL WOI
 TITANIUM 130-290 PL CPB38:2205
 TRIDECA-1,3,5-TRIENE-7,9,11-TRIYNE 0.05 RT CCO
 VULGARIN PL JSG
 VULGAROL FL CCO
 VULGAROLE PL 411/
 WATER 873,000 LF CRC
 ZINC 50-90 PL CPB38:2205

ARTOCARPUS ALTILIS (PARKINS.) FOSBERG

"BREADFRUIT"

ARTCARPIN FR HHB
 ASCORBIC-ACID 290-985 FR USA
 ASH 8,800-33,400 FR USA
 BORON 5.2-23 FR JFS51:523
 CALCIUM 170-1,950 FR USA WOI JFS51:523
 CARBOHYDRATES 179,200-922,450 FR USA WOI
 COPPER 0.8-7.5 FR USA JFS51:523
 CYSTINE 90-305 FR USA
 FAT 1,200-11,630 FR USA
 FIBER 10,600-64,725 FR USA
 IRON 3-24 FR USA WOI JFS51:523
 ISOLEUCINE 640-2,175 FR USA
 KILOCALORIES 1,030-3,500 FR USA
 LEUCINE 650-2,210 FR USA

LYSINE 370-1,258 FR USA
 MAGNESIUM 220-975 FR USA JFS51:523
 MANGANESE 0.6-3.5 FR JFS51:523
 METHIONINE 100-340 FR USA
 NIACIN 9-30 FR USA
 PANTOTHENIC-ACID 4-15.5 FR USA
 PAPAYOTIN FR HHB
 PHENYLALANINE 260-885 FR USA
 PHOSPHORUS 240-1,460 FR USA WOI
 JFS51:523
 POTASSIUM 2,930-16,700 FR USA
 JFS51:523
 PROTEIN 9,000-41,575 FR USA
 RIBOFLAVIN 0.3-1 FR USA
 SODIUM 11-98 FR USA JFS51:523
 SULFUR 120-530 FR JFS51:523
 THIAMIN 1-4 FR USA
 THREONINE 520-1,770 FR USA
 TYROSINE 190-645 FR USA
 VALINE 470-1,600 FR USA
 WATER 706,000-795,000 FR USA
 WOJFS51:523
 ZINC 1.2-8 FR JFS51:523

ARTOCARPUS HETEROPHYLLUS LAM.

"JACKFRUIT"

ACETYLCHOLINE SD HHB
 ARTOCARPANONE PL HHB
 ARTOCARPESINE WD HHB
 ARTOCARPETIN PL HHB
 ARTOCARPIN PL HHB
 ARTOFLAVANONE-2',4',5,7-
 TETRAHYDROXYFLAVONE PL JSG
 ARTOSTENONE LX WOI
 ASCORBIC-ACID 45-435 FR USA WOI
 ASH 10,000-37,355 FR USA
 ASH 15,000-30,990 SD WOI
 CALCIUM 200-1,735 FR USA WOI
 CALCIUM 500-1,033 SD WOI
 CAOUTCHOUC 60,000-100,000 LX WOI
 CARBOHYDRATES 189,000-896,900 FR
 USA WOI
 CARBOHYDRATES 384,000-793,400 SD
 WOI
 BETA-CAROTENE 0.2-8 FR CRC USA
 CONCAVALIN-A SD HHB
 COPPER 1.8-7 FR USA
 CYANOMACLURIN PL HHB
 CYCLOARTOCARPESINE WD HHB
 CYCLOARTOCARPIN PL JSG
 DIHYDROMORIN FR HHB

FAT 1,000-11,200 FR USA WOI
 FAT 4,000-8,265 SD WOI
 FIBER 10,000-48,245 FR USA WOI
 FIBER 15,000-30,990 SD WOI
 IRON 5-22 FR USA
 IRON 12-25 SD WOI
 KILOCALORIES 940-3,510 FR USA
 MAGNESIUM 370-1,380 FR USA
 MANGANESE 2-7 FR USA
 MORIN PL HHB
 NIACIN 4-15 FR USA
 NORARTOCARPETIN WD HHB
 OXYDIHYDROARTOCARPESINE WD
 HHB
 PHOSPHORUS 260-1,725 FR USA
 PHOSPHORUS 1,300-2,685 SD WOI
 POTASSIUM 1,990-15,125 FR USA
 PROTEIN 12,180-83,330 FR USA WOI
 PROTEIN 66,000-136,360 SD WOI
 RIBOFLAVIN 1-4 FR CRC
 SODIUM 20-150 FR USA
 TANNIN 33,000 BK WOI
 THIAMIN 0.3-3 FR CRC USA
 VIT-B6 1-4 FR USA
 WATER 712,740-772,000 FR USA
 WOI
 WATER 650,000-750,000 LX WOI
 WATER 516,000 SD WOI
 ZINC 4-16 FR USA

ARUNDO DONAX L.

"GIANT REED"

ALKALOIDS 5,000 PL RIZ
 ALPHA-AMYRIN-ACETATE LF RIZ
 BETA-AMYRIN-ACETATE LF RIZ
 L-ARABINO-D-GLUCURONO-D-XYLAN
 ST RIZ
 L-ARABINOSE ST RIZ
 ASH 92,000-150,000 PL CRC
 ASH 42,000 ST RIZ
 3,3'-BIS(INDOLYL-METHYL)-DIM-
 ETHYL-AMMONIUM-HYDROXIDE FL
 JSG
 BUFOTENINE LF RIZ
 BUFOTENIDINE RH RIZ
 CALCIUM 4,900 PL CRC
 CAMPESTEROL LF RIZ
 CARBOHYDRATE 699,000-777,000 PL
 CRC
 CELLULOSE 446,000-503,000 ST JAD
 RIZ
 DEHYDROBUFOTENINE RH RIZ
 N,N-DIMETHYLTRYPTAMINE LF RIZ

N,N-DIMETHYLTRYPTAMINE-
METHOHYDROXIDE FL RIZ
DONAXARIDINE PL RIZ
DONAXERINE RH HHB
DONAXINE RH HHB
ELEAGNINE FL RIZ
FAT 11,000-13,000 PL CRC
FAT 30,000 ST RIZ
FIBER 285,000-375,000 PL CRC
FLAVONE-C-GLYCOSIDES LF RIZ
FRIEDELIN LF RIZ
GALACTOSE ST RIZ
GLUCOSE PL RIZ
GLUCURONIC-ACID ST RIZ
GRAMINE RH RIZ
GRAMINE-METHOHYDROXIDE FL
RIZ
GRAMINE-N-OXIDE 700 PL RIZ
LIGNIN 157,000-227,000 ST JAD RIZ
LUPEOL LF RIZ
2-O-(4-O-METHYL-ALPHA-D-
GLUCOPYRANOSIDE-URONIC-A.)-D-
XYLOSE
5-METHOXY-N-METHYLTRYPTAMINE
PL JAD
PENTOSANS 251,000 ST RIZ
PHOSPHORUS 1,100 PL CRC
POTASSIUM 25,500 PL CRC
PROTEIN 69,000-132,000 PL CRC
RESIN ST RIZ
BETA-SITOSTEROL PL RIZ
STIGMASTEROL PL RIZ
TRIACONTANOL PL RIZ
TRIACONTANE PL RIZ
TRICIN PL RIZ
XYLOSE ST RIZ

See FT55:357.1984

ASARUM CANADENSE L.

"WILD GINGER"

ARISTOLOCHIC-ACID
ARISTOLONE RH HHB
BORNYL-ACETATE RH HHB
ELEMICIN RH HHB
EO 35,000-45,000 RH HHB 411/
GERANIOL RH HHB
LIMONENE RH HHB
LINALOOL RH HHB
LINALYL-ACETATE RH HHB
METHYLEUGENOL RH HHB
BETA-SITOSTEROL RH HHB
ALPHA-TERPINEOL RH HHB

ASCLEPIAS SYRIACA L.

"MILKWEED"

ALPHA-AMYRIN SP CRC
BETA-AMYRIN SP CRC
BETA-AMYRIN-ACETATE LX HHB
ASCLEPIADIN SP CRC
ASH 12,300 LX CRC
ASH 37,000-42,000 SD CRC
CAOUTCHOUC 16,000 PL ABS1/
CAOUTCHOUC 1,000-15,000 LX CRC
CINNAMIC-ACID SDS HHB
CINNAMIC-ACID-CARDENOLIDE-ESTER
SD HHB
CONDURANGIN SD CRC
CYMAROSE SD HHB
DESGLUCOUZARIN SD HHB
FAT 91,000-318,000 SD CRC
GLUCOSE SD HHB
9,12-HEXADECADIENOIC-ACID 1,820-
6,360 SD HHB
9-HEXADECENOIC-ACID 9,100-31,800
SD HHB
LINOLEIC-ACID 48,230-168,540 SD HHB
LINOLENIC-ACID 910-3,180 SD HHB
NICOTINE SP CRC
11-OCTADECENOIC-ACID 13,650-47,700
SD HHB
OLEIC-ACID 13,650-47,700 SD HHB
PALMITIC-ACID 3,640-12,720 SD HHB
POLYPHENOLS 72,000 PL ABS1/
PROTEIN 176,000-372,000 SD CRC
RHAMNOSE SD HHB
BETA-SITOSTEROL SP CRC
SYRIOBIOSIDE SD HHB
SYRIOGENIN SD HHB
TANNIN SP CRC
UZARIGENIN SD HHB
XYSMALOGENIN SD HHB

abs1/=Buchanan & Duke, 1981

ASIASARUM HETEROTROPOIDES MAEK.

"ASIAN WILD GINGER"

ARSENIC 0.68 RT CAL
CALCIUM 7,450-12,900 RT CAL SMO 1/
COPPER 13-14 RT CAL SMO
IRON 450-2,800 RT CAL SMO
(2E,4E,8Z,10E)-N-ISOBUTYL-2,4,8,10-
DODECATETRAENAMIDE CCO
(2E,4E,8Z,10Z)-N-ISOBUTYL-2,4,8,10-
DODECATETRAENAMIDE CCO

ELEMICIN RT CCO
 EUCARVONE RT CCO
 HIGENAMINE RT CCO
 MAGNESIUM 2,520-2,600 RT CAL SMO
 MANGANESE 120-248 RT CAL SMO
 MERCURY 0.19 RT CAL
 METHYLEUGENOL RT CCO
 PELLITORINE RT CCO
 ALPHA-PINENE RT CCO
 POTASSIUM 11,600-18,200 RT CAL SMO
 SAFROLE RT CCO
 SODIUM 226-278 RT CAL SMO
 ZINC 38-59 RT CAL SMO

1/ Mineral data from CAL and SMO may apply to other species of *Asiasarum*.

ASIASARUM SIEBOLDII (MIQ.)
 MAEK.

“SIEBOLD’S WILD GINGER”

ARSENIC 0.68 RT CAL
 L-ASARININ RT CCO
 CALCIUM 7,450-12,900 RT CAL SMO 1/
 COPPER 13-14 RT CAL SMO
 EO 20,000-30,000 RT CCO
 EUCARVONE RT CCO
 IRON 450-2,800 RT CAL SMO
 (2E,4E,8Z,10E)-N-ISOBUTYL-2,4,8,10-
 DODECATETRAENAMIDE CCO
 (2E,4E,8Z,10Z)-N-ISOBUTYL-2,4,8,10-
 DODECATETRAENAMIDE CCO
 KAKUOL RT CCO
 LIMONENE RT CCO
 MAGNESIUM 2,520-2,600 RT CAL SMO
 MANGANESE 120-248 RT CAL SMO
 MERCURY 0.19 RT CAL
 METHYLEUGENOL RT CCO
 PALMITIC-ACID RT CCO
 PELLITORINE RT CCO
 L-BETA-PINENE RT CCO
 POTASSIUM 11,600-18,200 RT CAL SMO
 SAFROLE RT CCO
 SAISHINONE RT CCO
 L-SESAMIN RT CCO
 SODIUM 226-278 RT CAL SMO
 ZINC 38-59 RT CAL SMO

ASIMINA TRILOBA (L.) DUNAL
 “PAWPAW”

3-ACETOXYBUTAN-2-ONE 0-0.108 FR
 JAF39:1634
 ALANINE 523-5,331 FR 476/

ANOLOBINE BK 33/
 ARGININE 240-2,336 FR 476/
 ASCORBIC-ACID 76-893 FR 476/
 ASH 6,000-22,000 FR 476/
 ASIMIOLOBINE PL 33/
 ASIMICIN SD JNP53:243
 ASIMINE SD 33/
 ASPARTIC-ACID 424-5,167 FR 476/
 BUTANE-2,3-DIOL-MONOBUTANOATE-1
 0-0.473 FR JAF39:1634
 BUTANE-2,3-DIOL-MONOBUTANOATE-2
 0-0.588 FR JAF39:1634
 BUTANE-2,3-DIOL-MONOHEXANOATE-1
 0-0.489 FR JAF39:1634
 BUTANE-2,3-DIOL-MONOHEXANOATE-2
 0-1.121 FR JAF39:1634
 BUTANE-2,3-DIOL-MONOOCTANOATE-1
 0-0.230 FR JAF39:1634
 BUTANE-2,3-DIOL-MONOOCTANOATE-2
 0-0.239 FR JAF39:1634
 BUTYL-(E)-BUT-2-ENOATE 0-0.845 FR
 JAF39:1634
 BUTYL-OCTANOATE 0-0.048 FR
 JAF39:1634
 BUTYRIC-ACID 0-0.001 FR
 JAF39:1634
 CAFFEIC-ACID LF 33/
 CALCIUM 530-3248 FR 476/
 BETA-CAROTENE 0.4-2.5 FR 476/
 CARBOHYDRATES 168,000-854,000 FR
 476/
 CITRONELLOL 0-0.024 FR JAF39:1634
 COREXIMINE PL 33/
 CYANIDIN PL JLS58:124
 DECANOIC-ACID 0.010-0.662 FR
 JAF39:1634
 DIBUTYL-PHTHALATE 0.020-0.036 FR
 JAF39:1634
 DODECANOIC-ACID 0.012-0.135 FR
 JAF39:1634
 ETHYL-ACETATE 0.008-0.143 FR
 JAF39:1634
 ETHYL-BUTANOATE 0.002-7.109 FR
 JAF39:1634
 ETHYL-(E)-BUT-2-ENOATE 0-0.291 FR
 JAF39:1634
 ETHYL-DECANOATE 0.003-1.920 FR
 JAF39:1634
 ETHYL-DODECANOATE 0.001-0.310 FR
 JAF39:1634
 ETHYL-HEXADECANOATE 0-0.060 FR
 JAF39:1634
 ETHYL-HEXANOATE 0.006-62.864 FR
 JAF39:1634

- ETHYL-HEXA-2,4-DIENOATE 0-0.155 FR
JAF39:1634
- ETHYL-(E)(E)-HEXA-2,4-DIENOATE 0-
0.047 FR JAF39:1634
- 2-ETHYL-HEX-AN-1-OL 0-0.004 FR
JAF39:1634
- ETHYL-(Z)-HEX-4-ENOATE 0-0.352 FR
JAF39:1634
- ETHYL-3-HYDROXYHEXANOATE 0-
0.676 FR JAF39:1634
- ETHYL-NICOTINATE 0-0.036 FR
JAF39:1634
- ETHYL-OCTANOATE 0.020-24.609 FR
JAF39:1634
- ETHYL-(Z)-OCT-4-ENOATE 0-0.716 FR
JAF39:1634
- ETHYL-TETRADECANOATE 0-0.215 FR
JAF39:1634
- (E)(E)-FARNESOL 0-0.058 FR JAF39:1634
- (E)(E)-FARNESYL-ACETATE 0-0.001 FR
JAF39:1634
- (E)(E)-FARNESYL-BUTANOATE 0-0.001
FR JAF39:1634
- (E)(E)-FARNESYL-HEXANOATE 0-0.060
FR JAF39:1634
- (E)(E)-FARNESYL-OCTANOATE 0-0.041
FR JAF39:1634
- FAT 6,000-59,000 FR 476/
- FIBER 14,000-150,000 FR 476/
- FRUCTOSE 13,000-119,658 FR 476/
- GERANIOL 0-1.305 FR JAF39:1634
- GERANYL-HEXANOATE 0-0.047 FR
JAF39:1634
- GERANYL-OCTANOATE 0-0.012 FR
JAF39:1634
- GLUCOSE 18,000-170,940 FR 476/
- GLUTAMIC-ACID 622-7,332 FR 476/
- GLYCINE 389-3,501 FR 476/
- HALF-CYSTINE 14-336 FR 476/
- 3-({HEPTYLCARBONYL}OXY)BUTAN-2-
ONE 0-0.740 FR JAF39:1634
- HEXADECANOIC-ACID 0-0.230 FR
JAF39:1634
- HEXANOIC-ACID 0-0.001 FR JAF39:1634
- 4-HEXANOLIDE 0-0.453 FR JAF39:1634
- (Z)-HEX-3-EN-1-OL 0-0.041 FR
JAF39:1634
- HEXYL-OCTANOATE 0-0.027 FR
JAF39:1634
- HISTIDINE 124-1,336 FR 476/
- 3-HYDROXYBUTAN-2-ONE 0.001-3.123
FR JAF39:1634
- HYDROXYPROLINE 70-836 FR 476/
- IRON 68-308 FR 476/
- ISOCORYDINE PL 33/
- ISOLEUCINE 373-4,166 FR 476/
- KCALS 770-3400 FR 476/
- LEUCINE 466-5,002 FR 476/
- LEUCOCYANIDIN LF 33/
- LIMONENE 0.027-0.548 FR JAF39:1634
- LINOLEIC-ACID 480-6,018 FR 476/
- LINOLENIC-ACID 840-14,396 FR 476/
- LIRIODENINE PL 33/
- LYSINE 339-3,831 FR 476/
- MAGNESIUM 1,090-5,128 FR 476/
- MANGANESE 25-111 FR 476/
- METHIONINE 70-836 FR 476/
- METHYL-BUTANOATE 0.047-0.119 FR
JAF39:1634
- METHYL-CYCLOHEXANE 0.063-0.196
FR JAF39:1634
- METHYL-DECANOATE 0-0.107 FR
JAF39:1634
- METHYL-DODECANOATE 0-0.060 FR
JAF39:1634
- METHYL-(E)(E)-FARNESATE 0.048-0.304
FR JAF39:1634
- METHYL-GERANATE 0-0.453 FR
JAF39:1634
- METHYL-HEXANOATE 0-5.344 FR
JAF39:1634
- METHYL-OCTANOATE 0.031-6.179 FR
JAF39:1634
- METHYL-(E)-OCTANOATE 0.031-6.179
FR JAF39:1634
- METHYL-(Z)-OCT-2-ENOATE 0-0.036 FR
JAF39:1634
- METHYL-TETRADECANOATE 0-0.058
FR JAF39:1634
- MICHELALBINE PL 33/
- MYRISTIC-ACID 306-4,956 FR 476/
- OCTANOIC-ACID 0-0.001 FR JAF39:1634
- 4-OCTANOLIDE 0-0.024 FR JAF39:1634
- OLEIC ACID 1,392-24,780 FR 476/
- PALMITIC-ACID 1,080-14,396 FR 476/
- PALMITOLEIC 348-6,018 FR 476/
- 3-({PENTYLCARBONYL}OXY)BUTAN-2-
ONE 0-1.305 FR JAF39:1634
- PHENYLALANINE 294-3,001 FR 476/
- PHOSPHORUS 420-2,265 FR 476/
- POTASSIUM 3,140-15,726 FR 476/
- PROLINE 282-3,648 FR 476/
- PROPYL-BUTANOATE 0-0.068 FR
JAF39:1634
- 3-({PROPYLCARBONYL}OXY)BUTAN-2-
ONE 0-2.407 FR JAF39:1634
- PROPYL-HEXANOATE 0-0.167 FR
JAF39:1634

PROTEIN 8,000-61,000 FR 476/
 QUERCETIN LF 33/
 QUERCETIN-3-GLUCOSIDE PL 496
 SERINE 354-3,666 FR 476/
 STEARIC-ACID 102-2,124 FR 476/
 SUCROSE 60,000-545,000 FR 476/
 SULFUR 620-3,333 FR 476/
 TETRADECANOIC-ACID 0.059-0.162 FR
 JAF39:1634
 TETRADECEN-1-OL 0-0.147 FR
 JAF39:1634
 THREONINE 254-2,812 FR 476/
 TOLUENE 0.001-0.024 FR JAF39:1634
 TRYPTOPHAN 35-536 FR 476/
 TYROSINE 140-1,501 FR 476/
 VALINE 334-3,661 FR 476/
 WATER 695,000-766,000 FR 476/
 ZINC 9-38 FR 476/

O.OO1=I PPB=TRACE (TRACE
 RECORDED AS 0.001)
 0=NOT DETECTABLE JAF38

ASPARAGUS LUCIDUS LINDL.

"LUCID ASPARAGUS"

ARSENIC 0.16 RT CAL
 ASPARAGINE RT CCO
 CALCIUM 1,810 RT CAL
 COPPER 4-5 RT CAL
 FRUCTOSE RT CCO
 GLUCOSE RT CCO
 IRON 30 RT CAL
 MAGNESIUM 430 RT CAL
 MANGANESE 10 RT CAL
 MERCURY 0.01 RT CAL
 5-METHOXY-METHYL-FURFURAL RT
 CCO
 POTASSIUM 6,350 RT CAL
 PROTOSARSAPOGENIN RT CCO
 SAPONIN RT CCO
 BETA-SITOSTEROL RT CCO
 SODIUM 139 RT CAL
 ZINC 7-8 RT CAL

ASPARAGUS OFFICINALIS L.

"ASPARAGUS"

ALANINE 1,440-18,581 SD USA
 ALUMINUM 13-700 SH USG
 ALPHA-AMINODIMETHYL-GAMMA-
 BUTYROTHETIN RH HHB
 ARGININE 1,430-18,452 SH USA
 ARSENIC 0.0045-0.006 SH USG

ASCORBIC-ACID 100-5,714 SH CRC
 ASH 6,000-171,000 SH CRC
 ASPARAGINE SH WOI
 ASPARAGOSIDES SH 411/
 ASPARAGUSIC-ACID SH 411/
 ASPARASAPONINS PL JSG
 ASPARTIC-ACID 3,550-45,805 SH USA
 BARIUM 2-70 SH USG
 BORON 6-104 SH BOB USG
 CADMIUM 0.018-0.07 SH USG
 CALCIUM 160-3,840 SH CRC USA USG
 CARBOHYDRATES 36,000-602,000 SH
 CRC USA
 ALPHA-CAROTENE PL JSG
 BETA-CAROTENE 0.3-120 SH CRC
 CHOLINE RH HHB
 CHROMIUM 0.135-0.7 SH USG
 COBALT 0.09-0.12 SH USG
 CONIFERIN SH HHB
 COPPER 1-24 SH USA USG
 M-CRESOL SH CRC(FSN)
 O-CRESOL SH CRC(FSN)
 P-CRESOL SH CRC(FSN)
 CYANIDIN-3,5-DIGLUCOSIDE SH HHB
 CYANIDIN-3-MONOGLUCOSIDE SH
 HHB
 CYANIDIN-3-RHAMNOSYLGLUCOSIDE
 SH HHB
 CYANIDIN-3-
 RHAMNOSYLGLUCOSYLGLUCOSIDE
 SH HHB
 CYSTINE 360-4,645 SH USA
 DIOSGENIN SH HHB
 FAT 2,000-41,000 SH CRC
 FIBER 7,000-141,000 SH CRC PED USA
 FOLACIN 1-18 SH USA
 FRUCTOSE RH HHB
 GLUCOSE SH HHB
 GLUTAMIC-ACID 5,010-64,645 SH USA
 GLYCINE 990-12,774 SH USA
 GUALACOL SH CRC(FSN)
 HISTIDINE 470-6,065 SH USA
 INOSITOL SH HHB
 INULIN RT 411/
 IRON 6-240 SH USA USG
 ISOLEUCINE 1,120-14,452 SH USA
 JAMOGENIN SH HHB
 KAEMPFEROL RT 411/
 KILOCALORIES 210-3,130 SH CRC PED
 USA
 LAURIC-ACID 10-129 SH USA
 LEAD 1.5-30 SH USG
 LEUCINE 1,330-17,161 SH USA
 LINOLEIC-ACID 910-11,742 SH USA

ALPHA-LINOLENIC-ACID 50-645 SH USA
 LITHIUM 0.36-0.6 SH USG
 LUTEIN PL JSG
 LYSINE 1,450-18,710 SH USA
 MAGNESIUM 165-7,000 SH USA USG
 MANGANESE 2-100 SH USA USG
 MANNAN RH HHB
 MERCURY 0.0009-0.0012 SH USG
 METHIONINE 290-3,742 SH USA
 MOLYBDENUM 0.63-1.8 SH USG
 MUFA 70-903 SH USA
 MYRISTIC-ACID 10-129 SH USA
 NIACIN 11-366 SH CRC USA
 NICKEL 0.9-1.8 SH USG
 OFFICINALISIN-II RT CCO
 OLEIC-ACID 60-774 SH USA
 PAEONIDIN-3-
 GLUCOSYL RHAMNOSYL GLUCOSIDE SH HHB
 PAEONIDIN RHAMNOSYL GLUCOSIDE SH HHB
 PALMITIC-ACID 450-5,806 SH USA
 PALMITOLEIC-ACID 10-129 SH USA
 PANTOTHENIC-ACID 2-22.4 SH USA
 PENTOSANS 70,000 SH HHB
 PHENOL SH CRC(FSN)
 PHENYLALANINE 720-9,290 SH USA
 PHILOTHION SH HHB
 PHOSPHORUS 390-10,244 SH CRC
 PHYTOSTEROLS 246-3,097 SH USA
 POTASSIUM 2,210-55,200 SH CRC USA USG
 PROLINE 1,620-20,903 SH USA
 PROTEIN 22,000-394,840 SH CRC USA
 PSEUDOASPARAGOSE RH HHB
 PUFA 960-12,387 SH USA
 QUERCETIN RT 411/
 RHAMNOSE SH HHB
 RIBOFLAVIN 1-36 SH CRC USA
 RUTIN RT HHB
 SARSAPOGENIN SH HHB
 SELENIUM 0.0405-0.078 SH USG
 SERINE 1,160-14,968 SH USA
 SFA 500-6,452 SH USA
 SILVER 0.09-0.12 SH USG
 SODIUM 18-685 SH CRC USA USG
 22-SPIROSTAN-3BETA-OL SH HHB
 STEARIC-ACID 30-387 SH USA
 STRONTIUM 19-200 SH USG
 SUCCINIC-ACID SH HHB
 SUCROSE RH HHB
 SUGAR 15,000 SH HHB
 SULFUR 56-864 SH USG

THIAMIN 1-26 SH CRC PED USA
 THREONINE 850-10,968 SH USA
 TITANIUM 0.45-180 SH USG
 TOCOPHEROL 19.8-256 SH USA
 TRYPTOPHAN 300-3,871 SH USA
 TYROSINE 480-6,194 SH USA
 VALINE 1,180-15,226 SH USA
 VANADIUM 0.3-2 SH USG
 4-VINYLGUALACOL SH CRC(FSN)
 4-VINYLPHENOL SH CRC(FSN)
 WATER 914,000-950,000 HHB USG
 ZEAXANTHIN PL JSG
 ZINC 12-124 SH USG
 ZIRCONIUM 1.8-2.4 SH USG

1/ USG= U. S. Geol. Survey; multiplying hi & lo % of ash by hi & lo % of mineral to get hi & lo ppm, which may stretch the range..

ASPIDOSPERMA QUEBRACHO-BLANCO SCHLECHT.

"QUEBRACHO"

AKUAMMICINE BK 411/
 AKUAMMIDINE BK AYL
 ALKALOIDS 3,000-15,000 HHB
 ASPIDOSAMINE BK AYL
 ASPIDOSPERMICINE BK HHB
 ASPIDOSPERMIDINE BK AYL
 ASPIDOSPERMINE BK CCO
 ASPIDOSPERMINE BK HHB
 ASPIDOSPERMATIDINE BK HHB
 ASPIDOSPERMATINE BK AYL
 DESACETYLPYRIFOLIDINE BK HHB
 DESACETYLASPIDOSPERMINE BK HHB
 1,2-DEHYDROASPIDOSPERMIDINE BK HHB
 14,19-DIHYDROASPERMATIDINE BK HHB
 EBURNAMININE BK AYL
 D-EBURNAMONINE BK HHB
 HYPOQUEBRACHAMINE BK HHB
 HYPOQUEBRACHINE BK HHB
 LUPEOL BK AYL
 1-METHYLASPIDOSPERMIDINE BK HHB
 N(A)-METHYLDESACETYLASPIDOSPERMINE BK HHB
 L-PYRIFOLIDINE BK AYL
 QUEBRACHACIDINE BK HHB
 L-QUEBRACHAMINE BK AYL
 QUEBRACHITOL 1,000 BK HHB

QUEBRACHOL BK HHB
 RHAZIDIGENIN BK HHB
 RHAZIDIGENIN-N-OXIDE BK HHB
 RHAZIDINE BK AYL
 RHAZINILAM LF AYL
 BETA-SITOSTEROL BK AYL
 TANNIN 30,000-40,000 BK AYL
 VINCINE BK HHB
 YOHIMBIC-ACID BK HHB
 YOHIMBINE BK HHB

ASTRAGALUS GUMMIFER LABILL.

"TRAGACANTH; GUM TRAGACANTH"

ACETIC-ACID 25,000 GUM AYL WOI
 ALDIBIURONIC-ACIDS GUM AYL
 ARABINO GALACTAN GUM AYL
 L-ARABINOSE GUM AYL
 ASH 15,000-30,000 GUM AYL WOI
 BASSORIN 600,000-700,000 GUM AYL
 CELLULOSE 10,000-40,000 GUM AYL
 EO 20,000-30,000 GUM AYL
 L-FUCOSE GUM AYL
 D-GALACTOSE GUM AYL
 D-GALACTURONIC-ACID GUM AYL
 MUCRONULATOL LF RIZ
 L-RHAMNOSE GUM AYL
 STARCH 10,000-30,000 GUM AYL
 TRAGACANTHIC-ACID GUM AYL
 TRAGACANTHIN 80,000-300,000 GUM
 AYL WOI
 D-XYLOSE GUM AYL

ASTRAGALUS MEMBRANACEUS (FISCH.) BUNGE

"HUANG-CHI"

ASTRAGALOSIDE-I RT CCO
 ASTRAGALOSIDE-II RT CCO
 ASTRAGALOSIDE-III RT CCO
 ASTRAGALOSIDE-IV RT CCO
 ASTRAGALOSIDE-V RT CCO
 ASTRAGALOSIDE-VI RT CCO
 ASTRAGALOSIDE-VII RT CCO
 ASTRASOFLAVAN RT CCO
 ASTRAMEMBRANAGENIN PL JSG
 ASTRAPTEROCARPAN RT CCO
 BETAINE RT CCO
 CALCIUM 1,700 RT SMO
 CHOLINE RT CCO
 COPPER 1 RT SMO

(3R)-(-)-7,2'-DIHYDROXY-3',4'-
 DIMETHYLISOFLAVAN-7-O-BETA-D-
 GLUCOPYRANOSYL JNP54:810
 2',3'-DIHYDROXY-7,4'-
 DIMETHOXYISOFLAVONE RT CCO
 7,3'-DIHYDROXY-9,10-
 DIMETHOXYPTEROCARPANE RT
 CCO
 FORMONONETIN RT CCO
 D-FRUCTOSE RT CCO
 GABA RT CCO
 D-GLUCOSE RT CCO
 3'-HYDROXYFORMONONETIN RT CCO
 IRON 460 RT SMO
 ISOASTRAGALOSIDE-I RT CCO
 ISOASTRAGALOSIDE-II RT CCO
 ISOASTRAGALOSIDE-IV RT JNP54:810
 ISOLIQURITIGENIN RT CCO
 LINOLEIC-ACID RT CCO
 LINOLENIC-ACID RT CCO
 MAGNESIUM 1,860 RT SMO
 MANGANESE 29 RT SMO
 POTASSIUM 10,000 RT SMO
 BETA-SITOSTEROL RT CCO
 SODIUM 56 RT SMO
 SOYASAPONIN-I RT CCO
 SUCROSE RT CCO
 3-O-BETA-D-XYLOPYRANOSYL-25-O-
 BETA-D-GLUCOPYRANOSYL-
 CYCLOASTRAGENOL JNP54:810
 ZINC 16 RT SMO

ATRACTYLODES LANCEA DC.

"CANG ZHU"

3-BETA-ACETOXYATRACTYLON RH
 CCO
 ACETYLATRACTYLODINOL RH CCO
 ATRACTYLODIN RH CCO
 ATRACTYLODINOL RH CCO
 ATRACTYLON RH CCO
 L-ALPHA-BISABOLOL RH CCO
 CALCIUM 11,300 RH SMO
 COPPER 12 RH SMO
 ELEMOL RH CCO
 EO 50,000-90,000 RH CCO
 BETA-EUDESOL RH CCO
 2-FURALDEHYDE RH CCO
 FURFURAL RH CCO
 HINESOL RH CCO
 3-BETA-HYDROXYATRACTRYLON PL
 JSG
 IRON 290 RH SMO
 MAGNESIUM 790 RH SMO

MANGANESE 39 RH SMO
 POTASSIUM 6,210 RH SMO
 BETA-SELINENE RH CCO
 SODIUM 197 RH SMO
 ZINC 33 RH SMO

***ATRACTYLODES OVATA* DC**

“PAI-CHU; BAI-ZHU”

3-BETA-ACETYLATRACTYLON RH JSG
 ARSENIC 0.01 RH CAL
 ATRACTYLOL RH CCO
 ATRACTYLONE RH CCO
 CALCIUM 5,800-11,600 RH CAL SMO
 COPPER 8-18 RH CAL SMO
 3-BETA-HYDROXYATRACTRYLON PL JSG
 IRON 210-780 RH CAL SMO
 MAGNESIUM 760-960 RH CAL SMO
 MANGANESE 30-139 RH CAL SMO
 POTASSIUM 6,150-11,700 RH CAL SMO
 SODIUM 220-238 RH CAL SMO
 ZINC 26-32 RH CAL SMO

***ATROPA BELLA-DONNA* L.**

“BELLADONNA”

AESCULETIN PL CCO
 ALKALOIDS 1,000-12,000 LF HHB
 ALKALOIDS 4,000-8,800 RT HHB WOI
 APOATROPINE PL JSG
 ASPARAGINE RT HHB
 ATROPAMINE LF RT HHB
 ATROPINE RT MPI
 BELLADONNINE LF RT HHB
 BELLARIDINE PL JSG
 CHOLINE RT HHB
 CUSCOHYGRINE RT HHB
 HELLARADINE 20 RT HHB
 HOMATROPINE RT MPI
 L-HYOSCYAMINE 3,080-7,656 RT HHB
 HYOSCYAMINE 2,000-8,712 RT HHB
 KAEMPFEROL-7-GLUCOSIDE-3-RHAMNOGALACTOSIDE LF HHB
 KAEMPFEROL-7-GLUCOSIDE-3-RHAMNOGLUCOSIDE LF HHB
 LEUKATROPINIC-ACID RT HHB
 METELOIDINE RT HHB
 DELTA-N-METHYLORNITHINE PL CCO
 METHYLPYRROLIDINE RT HHB
 METHYLPYRROLINE RT HHB
 NICOTINE LF HHB
 NORATROPINE RT HHB

NORHYOSCYAMINE RT HHB
 PHYTOSTEROLS RT HHB
 PYRIDINE RT HHB
 QUERCETIN-7-GLUCOSIDE-3-RHAMNOGALACTOSIDE LF HHB
 QUERCETIN-7-GLUCOSIDE-3-RHAMNOGLUCOSIDE LF HHB
 SCOPINE RT HHB
 SCOPOLAMINE 40-88 RT HHB
 L-SCOPOLAMINE LF RT CCO
 SCOPOLETIN RT HHB
 STARCH RT HHB
 SUCCINIC-ACID LF HHB
 TANNIN 120,000 RT HHB
 TROPACOCAINE RT HHB
 TROPINE RT HHB
 UMBELLIFERONE RT CCO

***AVENA SATIVA* L.**

“OATS”

ACETIC-ACID PL HHB
 ACONITIC-ACID PL HHB
 AEGILOPSIN HU HHB
 ALANINE 4,000 SD CCG
 ALUMINUM TR PL PED
 DELTA-AMINO-LEVULINIC-ACID SP NAP
 1-(3-AMINO-PROPYL)-PYRROLINIUM SP NAP
 APIGENIN-8-C-ARABINOSYLHEXOSIDE LF RIZ
 APIGENIN-6,8-DI-C-GLUCOSIDE LF NAP
 APIGENIN-6-C-GLUCOSIDE LF NAP
 APIGENIN-6-C-GLUCOSYL-ARABINOSIDE LF NAP
 APIGENIN-8-C-RHAMNOSYLGLUCOSIDE LF RIZ
 ARGININE 3,000-13,000 SD CCG
 ASH 22,000-210,000 PL CCG CRC PED
 ASH 19,000-96,000 SD CCG CRC
 ASPARTIC-ACID 7,000 SD CCG
 AVENACINS RT NAP
 AVENACOSIDE-A SD HHB
 AVENACOSIDE-B SD HHB
 AVENALUMIN-I LF NAP
 AVENANTHRAMIDES SD NAP
 AVENARIN PL HHB
 AVENIC-ACIDS RT NAP
 AVENIN RT NAP
 DELTA-5-AVENASTEROL SD RIZ
 DELTA-7-AVENASTEROL SD RIZ

BENZALDEHYDE SD NAP
 BETAINE 11.7 RT NAP
 BETAINE 234 SH NAP
 BIOTIN 0.132-1.4 SD CCG
 BORON 2-7 SD BOB
 BRASSICASTEROL SD HHB
 BUTENYL-ISOTHIOCYANATE SD NAP
 CAFFEIC-ACID PL PAS
 CAFFEIC-ACID-ESTER SD HHB
 CALCIUM 1,300-14,300 PL CCG PED
 CALCIUM 400-4,800 SD CCG CRC
 CAMPESTEROL SD HHB
 CARBOHYDRATES 265,000-861,000 PL CCG CRC
 CARBOHYDRATES 562,000-775,000 SD CCG CRC WOI
 CAROTENE 2.6-702 PL CCG
 CAROTENE 0-0.22 SD CCG
 BETA-CAROTENE 0-75 PL CRC WOI
 CARYOPHYLLENE SD NAP
 CELLULOSE 350,000 HU WOI
 CELLULOSE 305,000 PL CCG
 CHLORINE 1,000-5,700 PL CCG
 CHLORINE 500-1,900 SD CCG
 CHLOROPHYLL-A PL PAS
 CHLOROPHYLL-B PL PAS
 CHOLESTEROL SD HHB
 CHOLINE 24 RT NAP
 CHOLINE 134-1,100 SD NAP
 CHOLINE 37 SH NAP
 CHOLINE 755-1,712 SD CCG
 CHROMIUM 39 PL PED
 CITRIC-ACID PE NAP
 COBALT 0.03-0.224 PL CCG (16-17)(PED)
 COBALT 0-0.32 SD CCG
 COLAMINE SD HHB
 COPPER 4 PL CCG
 COPPER 2.4-25.7 SD CCG
 P-COUMARIC-ACID SD NAP
 BETA-CYCLOCITRAL SD NAP
 CYSTINE 1,000-5,000 SD CCG
 DEC-TRANS-2-EN-1-AL SD NAP
 DEC-TRANS-2-TRANS-4-DIEN-1-AL SD NAP
 26-DESGLUCAVENACOSIDES PL JSG
 DIADENOSINE-TETRAPHOSPHORIC-ACID SP HHB
 DIAMINO-PROPANE SP NAP
 4,5-DIHYDROXY-7-METHOXY-8-C-GLUCOSYL-O-RHAMNOSIDE LF NAP
 5-HYDROXY-3',5'-DIMETHOXY-GLUCOSIDE LF NAP
 3,4-DIMETHOXY-ACETOPHENONE PE NAP
 DIMETHOXY-BUTYL-BENZENE PE NAP
 ERGOTHIONEINE SD NAP
 FAT 19,000-39,000 PL CCG CRC
 FAT 11,000-97,000 SD CCG CRC WOI
 FERULIC-ACID SD CRC(FNS)
 FERULIC-ACID-ESTER SD HHB
 FIBER 122,000-417,000 PL CCG
 FIBER 10,000-289,000 SD CCG CRC WOI
 FOLIC-ACID 0-0.75 SD CCG
 FORMALDEHYDE SD NAP
 FRUCTOSE PL HHB
 FUR-2-ALDEHYDE SD NAP
 FURFURAL 100,000 HU WOI
 GERANIOL-ACETONE SD NAP
 GLUCOSE PL HHB
 GLUCOVANILLIN HU HHB
 GLUTAMIC-ACID 19,000 PL CCG
 GLUTAMIC-ACID 29,000-31,000 SD CCG
 GLUTARIC-ACID PE NAP
 GLYCINE 2,000 SD CCG
 GRAMININE RH HHB
 GUANINE PL HHB
 HEPTAN-1-AL SD NAP
 HEPTANAL SD NAP
 TRANS-HEPT-2-ENAL SD NAP
 HEXANAL SD NAP
 HEX-CIS-3-EN-1-OL SD NAP
 HEX-TRANS-3-ENYL-ACETATE SD NAP
 HEXYL-ACETATE SD NAP
 HISTIDINE 1,000-6,000 SD CCG
 P-HYDROXYBENZOIC-ACID SD NAP
 5-HYDROXY-3',5'-DIMETHOXY-GLUCOSIDE LF NAP
 5-HYDROXY-N-HENTRIACONTAN-14,16-DIONE SD RIZ
 6-HYDROXY-N-HENTRIACONTAN-14,16-DIONE SD RIZ
 7-HYDROXY-N-HENTRIACONTAN-14,16-DIONE SD RIZ
 BETA-HYDROXY-BETA-METHYL-GLUTARIC-ACID PE NAP
 HYPOXANTHIN PL HHB
 INDOLE-3-ACETIC-ACID-GLUCOPROTEIN SH NAP
 IODINE 0.154 PL CCG
 BETA-IONONE SD NAP
 IRON 110-990 PL CCG
 IRON 20-300 SD CCG
 ISOLEUCINE 13,000 PL CCG
 ISOLEUCINE 4,000-9,000 SD CCG
 ISOORIENTIN LF NAP

- ISOORIENTIN-2"-O-ARABINOSIDE LF NAP
 ISOORIENTIN-2"-O-BETA-D-DIGLYCOSIDE LF NAP
 ISOORIENTIN-7-O-BETA-D-GLYCOSIDE LF NAP
 ISOSWERTISIN-2"-RHAMNOSIDE 16 LF NAP
 ISOSWERTISIN-2"-O-ALPHA-L-RHAMNOSIDE LF NAP
 ISOVITEXIN PL PAS
 ISOVITEXIN-2"-O-ARABINOSIDE LF NAP
 ISOVITEXIN-2"-O-ALPHA-L-ARABINOSIDE SH NAP
 ISOVITEXIN-2"-O-RHAMNOSIDE ST NAP
 ALPHA-KETO-GLUTARIC-ACID PE NAP
 KILOCALORIES 4,529-4,540 PL CCG CRC
 KILOCALORIES 3,740-4,710 SD CRC
 LEUCINE 18,000 PL CCG
 LEUCINE 6,000-14,000 SD CCG
 LICHENIN SD NAP
 LIGNIN 100,000-150,000 HU WOI
 LIGNIN 85,000 PL CCG
 LIMONENE SD NAP
 LOPHENOL SD NAP
 LUTEOLIN-6-C-GLUCOSIDE LF NAP
 LUTEOLIN-6-C-GLUCOSYL-ARABINOSIDE LF NAP
 LYSINE 14,000 PL CCG
 LYSINE 2,000-7,000 SD CCG
 MAGNESIUM 300-14,800 PL CCG
 MAGNESIUM 300-2,900 SD CCG
 MALIC-ACID PE NAP
 MALONIC-ACID PE NAP
 MANGANESE 5-168 PL CCG PED
 MANGANESE 20-204 SD CCG
 METHIONINE 2,000 PL CCG
 METHIONINE 1,000-4,000 SD CCG
 METHOXY-MALIC-ACID PE NAP
 7-METHOXY-VITEXIN-O-RHAMNOSIDE LF NAP
 2-METHYL-HEPT-2-EN-6-ONE SD NAP
 GAMMA-MUUROLENE SD NAP
 MYRCENE SD NAP
 NIACIN 26-99 PL CCG
 NIACIN 6-44 SD CCG
 NICOTIANAMINE SP NAP
 NONAN-1-AL SD NAP
 NONAN-1-OL SD NAP
 NONA-TRANS-2-TRANS-4-DIENAL SD NAP
 TRANS-NON-2-ENAL SD NAP
 TRANS-BETA-OCIMENE SD NAP
 OCTANAL SD NAP
 OCTAN-1-AL SD NAP
 OCTAN-1-OL SD NAP
 OCT-1-EN-3-OL SD NAP
 OCT-TRANS-2-EN-1-OL SD NAP
 OXALIC-ACID 400 PL HHB
 PANTOTHENIC-ACID 3.5-45.3 PL CCG
 PANTOTHENIC-ACID 4.4-28.3 SD CCG
 1,3,4-PENTANE-TRICARBOXYLIC-ACID-TRIMETHYL-ESTER 1.3 PC NAP
 PENTOSANS 320,000-360,000 HU WOI
 PHAEOPHORBIDE SP NAP
 PHENYLALANINE 4,000-10,000 SD CCG
 PHOSPHORUS 1,600-8,800 PL CCG
 PHOSPHORUS 500-10,200 SD CCG
 POTASSIUM 2,000-78,900 PL CCG
 POTASSIUM 2,200-8,900 SD CCG
 PROLINE 276 RT NAP
 PROLINE 150 SH NAP
 PROPANAL SD NAP
 PROTEIN 14,000-424,000 PL CCG
 PROTEIN 74,000-232,000 SD CCG
 PUTRESCINE 1,186 nM/g LF NAP
 PYRIDOXINE 1.76-3.08 PL CCG
 PYRIDOXINE 0.22-2.4 SD CCG
 QUERCETIN 310 HA NAP
 O"-RHAMNOSYL-8-C-D-GLUCOPYRANOSYLGENKWANIN SP RIZ
 RIBOFLAVIN 4.6-26 PL CCG
 RIBOFLAVIN 0.66-11.66 SD CCG
 SALICYLIC-ACID-METHYL-ESTER SD NAP
 SCPOLETIN 10 RT NAP
 SCOPOLIN SP NAP
 SECALOSE PL HHB
 SELENIUM 13 PL PED
 SERINE 4,000 SD CCG
 SILICON 183 PL PED
 SILICON-OXIDE (50-60% ASH) HHB
 SINAPIC-ACID SD NAP
 BETA-SITOSTEROL PL PAS
 SODIUM 700-9,400 PL CCG
 SODIUM 100-1,600 SD CCG
 SPERMIDINE 14 LF NAP
 SPERMINE 13 LF NAP
 STARCH 500,000-600,000 SD HHB
 STIGMASTADIENOL SD HHB
 STIGMASTEROL SD HHB
 DELTA-7-STIGMASTEROL SD HHB
 SUCROSE PL HHB
 SUGARS 30,000-93,000 PL CCG WOI

SUGARS 20,000-50,000 SD HHB
 SULFUR 800-4,100 PL CCG
 SULFUR 1,500-3,100 SD CCG
 TARTARIC-ACID PE NAP
 THIAMIN 0.9-4.0 PL CCG
 THIAMIN 2.6-12.1 SD CCG WOI
 THREONINE 16,000 PL CCG
 THREONINE 3,000-7,000 SD CCG
 TIN 6 PL PED
 ALPHA-TOCOPHEROL 4.4-10.1 SD CCG
 TRICIN LF NAP
 TRICIN-4'-O-ALPHA-L-ARABINOSIDE
 IN NAP
 TRICIN-4',7-DI-O-BETA-D-GLYCOSIDE
 IN NAP
 TRICIN-4'-O-BETA-D-GLYCOSIDE LF
 NAP
 TRICIN-7-O-BETA-D-GLYCOSIDE LF
 NAP
 TRICIN-7-O-ALPHA-L-
 RHAMNOSYL=HEXOSIDE ST NAP
 2,2,6-TRIMETHYL-CYCLOHEXANONE
 SD NAP
 TRYPTOPHAN 2,000 PL CCG
 TRYPTOPHAN 0-3,000 SD CCG
 TYROSINE 2,000-14,000 SD CCG
 URONIC-ACIDS
 VALINE 12,000 PL CCG
 VALINE 4,000-11,000 SD CCG
 VANILLIC-ACID SD NAP
 VANILLIN PL PAS
 4-VINYL-GUAIACOL SD NAP
 VITEXIN-O-GLUCOSIDE SP NAP
 VITEXIN-2"-RHAMNOSIDE LF JSG
 WATER 792,000 PL PED
 WATER 48,000-213,000 SD CCG
 WAX 9,000 SD NAP
 XANTHOPHYLL-EPOXIDE SP HHB
 ZINC TR PL PED

AVERRHOA CARAMBOLA L.

"CARAMBOLA"

ALANINE 370-2,075 FR USA
 ALUMINUM 3-41 FR JAD
 BETA-APO-8'-CAROTENE FR PC22:1479
 ARGININE 110-1,210 FR USA
 ASCORBIC-ACID 200-4,935 FR CRC USA
 ASPARTIC-ACID 510-5,615 FR USA
 ASH 3,000-52,000 FR CRC USA
 BORON 0.6-8 FR JAD
 CALCIUM 29-1,040 FR CRC USA
 CARBOHYDRATES 67,000-936,000 FR
 CRC USA

BETA-CAROTENE 2-75 FR CRC
 CAROTENOIDS 3-220 CRC JAD
 COPPER 1-15 FR USA
 P-COUMARIC-ACID PL JLS58:134
 CRYPTOCHROME FR PC22:1479
 BETA-CRYPTOFLAVIN 0.6-75 FR CRC
 PC22:1479
 CRYPTOXANTHIN FR PC22:1479
 CYANIDIN PL JLS58:134
 BETA-DAMASCENONE FR PC29:169
 FAT 2,500-52,000 FR CRC USA
 FIBER 6,000-130,000 FR CRC USA
 GLUTAMIC-ACID 770-8,480 FR USA
 GLYCINE 260-2,860 FR USA
 HISTIDINE 40-440 FR USA
 BETA-IONONE FR PC29:169
 IRON 1-115 FR CRC USA
 ISOLEUCINE 230—2,530 FR USA
 KILOCALORIES 280-3,920 FR CRC USA
 LEUCINE 400-4,400 FR USA
 LUTEIN FR PC22:1479
 LYSINE 400-4,400 FR USA
 MAGNESIUM 80-1,200 FR JAD USA
 MANGANESE 1-11 FR USA
 METHIONINE 110-1,210 FR USA
 MUTATOXANTHIN 0.3-30 FR CRC
 PC22:1479
 NIACIN 3-53 FR USA
 NITROGEN 10,200-12,800 FR JAD
 PHENYLALANINE 190-2,090 FR USA
 PHOSPHORUS 140-1,980 FR USA
 PHYTOFLUENE 0.3-37 FR CRC
 PC22:1479
 POTASSIUM 1,400-23,500 FR CRC USA
 PROLINE 260-2,860 FR USA
 PROTEIN 3,000-73,000 FR CRC USA
 RIBOFLAVIN 0.2-5.2 FR CRC USA
 SERINE 430-4,735 FR USA
 SINAPIC-ACID PL JLS58:134
 SODIUM 17-351 FR CRC JAD USA
 SULFUR 1,000-1,300 FR JAD
 THIAMIN 0.2-6.57 FR CRC USA
 THREONINE 230-2,530 FR USA
 TRYPTOPHAN 40-440 FR USA
 TYROSINE 230-2,530 FR USA
 VALINE 260-2,860 FR USA
 WATER 874,000-923,000 FR CRC USA
 ZINC 1-12 FR USA

AZADIRACHTA INDICA A. JUSS.

"NEEM"

7-ACETYLNEOTRICHILENONE SD JAC
 6-ACETYL-NIMBANDIOL SD JAC

- 6-O-ACETYL-NIMBANDIOL PL JSG
 3-ACETYL-7-TIGLOYL-LACTONE-VILASININ LF JAC
 ARACHIDIC-ACID 9,360 FR ABS4/
 ASH 39,000 FR CRC
 ASH 112,000 LF CRC
 AZADIRACHTANIN LF ABS1/
 AZADIRACHTANIN-A LF JAC
 AZADIRACHTIN SD JAC
 AZADIRACHTOL FR JAC
 AZADIRADIONE SD JAC
 AZADIRONE SD JAC
 BEHENIC-ACID 2,385 FR ABS4/
 CALCIUM 1,381-3,400 FR ABS4/ CRC
 CALCIUM 16,700-26,500 LF ABS4/ CRC
 CARBOHYDRATES 834,000 FR CRC
 CARBOHYDRATES 692,000 LF CRC
 7-DESACETYL-7-BENZOYL-AZADIRADIONE SD JAC
 7-DESACETYL-7-BENZOYLEPOXY-AZADIRADIONE SD JAC
 3-DESACETYL-3-CINNAMOYL-AZADIRACHTIN LF JAC
 7-DESACETYL-GEDUNIN SD JAC
 7-DESACETYL-7-HYDROXY-AZADIRADIONE FR JAC
 DESACETYLNIMBIN ST BK MPI
 6-DESACETYLNIMBINENE BK LF SD JAC
 3-DESACETYLSALANNIN SD JAC
 3-DESACETYL-SALANIN LF ABS5/
 1BETA,2BETA-DIEPOXY-AZADIRADIONE SD JAC
 22,23-DIHYDRO-23BETA-METHOXY-AZADIRACHTIN SD JAC
 4ALPHA,6ALPHA-DIHYDROXY-A-HOMO-AZADIRADIONE LF JAC
 EO 200 ST BK MPI
 17-EPIAZADIRADIONE SD JAC
 4-EPINIMBIN SD JAC
 EPOXYAZADIRADIONE SD JAC
 FAT 55,000 FR CRC
 FAT 42,000 FR CRC
 FAT 450,000 SD WOI
 FIBER 127,000 LF CRC
 GEDUNIN SD JAC
 17-BETA-HYDROXYAZADIRDIONE SD JAC
 HYPEROSIDE LF RAA
 ISOAZADIROLIDE LF JAC
 ISOMARGOSINOLIDE PL JAC
 ISONIMBOCINOLIDE LF JAC
 ISONIMOLICINOLIDE FR JAC
 ISONIMBINOCINOLIDE PL JSG
 ISONIMBINOLIDE ST BK ABS2
 LIGNOCERIC-ACID 1,125 FR ABS4/
 LINOLEIC-ACID 47,250 FR ABS4/
 KAEMPFEROL 2,000 FL MPI
 MAGNESIUM 4,000 FR ABS4/
 MAGNESIUM 7,100 LF ABS4/
 MARGODUNOLIDE PL JSG
 MARGOSINE ST BK MPI
 MARGOSINOLIDE PL JAC
 MELDENIN SD JAC
 MELIANTRIOL SD JAC
 1ALPHA-METHOXY—1,2-DIHYDROAZADIRADIONE SD JAC
 MYRICETIN 1,000 FL MPI
 MYRISTIC-ACID 630 FR ABS4/
 NIMBANDIOL LF ST JAC
 NIMBAFLAVONE LF RAA
 NIMBIDIN SD
 NIMBIDIN 4,000 ST BK MPI ABS3/
 NIMBIN 400 ST BK MPI
 NIMBINENE BK ST LF JAC
 NIMBININ 10 ST BK MPI
 NIMBINONE ST BK ABS2/
 NIMBIOL BK JAC
 NIMBIONE ST BK ABS2/
 NIMBOCINOLIDE PL JSG
 NIMBOCINOME PL JCS
 NIMBOLIDE LF JAC
 NIMBOLIN-A WD JAC
 NIMBOLIN-B WD JAC
 NIMBOSTEROL 300 ST BK MPI
 NIMOCINOL FR JAC
 NIMOLICINOIC-ACID FR JAC
 NIMOLICINOL SD JAC
 NIMOLINONE FR JAC
 NONACOSANE FL MPI
 OLEIC-ACID 238,050 FR ABS4/
 PALMITIC-ACID 63,000-71,550 FR ABS4/
 WOI
 PHOSPHORUS 2,265-2,400 FR ABS4/ CRC
 PHOSPHORUS 1,900-2,400 LF ABS4/ CRC
 PROTEIN 72,000 FR CRC
 PROTEIN 154,000 LF CRC
 QUERCETIN 1,000 FL MPI
 QUERCETIN LF MPI
 QUERCITRIN LF RAA
 RESIN SD MPI
 RUTIN LF RAA
 SALANNIN SD JAC
 SALANNOLIDE PL JSG
 SCOPOLETIN PL JAC
 BETA-SITOSTEROL FL LF MPI

STEARIC-ACID 79,650-81,000 FR ABS4
 WOI
 SUGIOL BK JAC
 SULFUR 1,921 SD MPI
 TANNIN 60,000 ST BK MPI
 1-TIGLOYL-3-ACETYL-11-METHOXY-
 AZADIRACTININ BK JAC
 3-TIGLOYLAZADIRACHLOL SD JAC
 VEPININ SD JAC
 VILASANIN LF JAC

abs1=5th Intern.Symp.Med.Arom. & Sp. Pl.
 abs2/=PC27:1801.1988
 abs3=pm43(1):59.1981
 abs4/=Radwanski, 1969.
 abs5/=pc23:2115.1984/
 JAC=Jacobson, 1989, CRC Focus on
 Phytochemical Pesticides

BALANITES AEGYPTIACA (L.) DELILE

"DESERT DATE"

ARACHIDONIC-ACID SD NUT
 ASCORBIC-ACID 390 FR NUT
 ASH 52,000-81,000 FR NUT
 ASH 127,000 LF NUT
 ASH 33,000 SD NUT
 ASH 66,000 SH NUT
 BALANITESIN SD NUT
 BERGAPTEN BK NUT
 CALCIUM 1,300-3,800 FR NUT
 CALCIUM 4,800 SH NUT
 CARBOHYDRATES 791,000-886,000 FR
 NUT
 CARBOHYDRATES 715,000 LF NUT
 CARBOHYDRATES 644,000 SH NUT
 ALPHA-CAROTENE SD NUT
 DIOSGENIN FR NUT
 FAT 0-17,000 FR NUT
 FAT 42,000 LF NUT
 FAT 300,000-550,000 SD NUT
 FAT 15,000 SH NUT
 FIBER 102,000 FR NUT
 FIBER 136,000 LF NUT
 FIBER 233,000 SH NUT
 GLUCOSE FR SD NUT
 LINOLEIC-ACID 120,000-220,000 SD
 NUT
 MARMESIN BK NUT
 OLEIC-ACID 81,000-135,000 SD NUT
 PALMITIC-ACID 57,000-104,500 SD NUT
 PHOSPHORUS 4,000 FR NUT
 PHOSPHORUS 3,800 SH NUT

PROTEIN 61,000-111,000 FR NUT
 PROTEIN 116,000 LF NUT
 PROTEIN 219,000 SD NUT
 PROTEIN 275,000 SH NUT
 RHAMNOSE FR SD NUT
 RIBOSE SD NUT
 SAPOGENIN 7,200-40,800 FR ABS1/
 SAPOGENIN 7,400-17,400 SD ABS1/
 SAPONIN 70,000 FR NUT
 BETA-SITOSTEROL BK NUT
 BETA-SITOSTEROL-GLUCOSIDE BK
 NUT
 25-ALPHA-SPIROSTA-3,5-DIENE S NUT
 STEARIC-ACID 42,000-77,000 SD NUT
 SUGARS 380,000-400,000 FR NUT
 XYLOSE SD NUT
 YAMOGENIN FR NUT

abs1/ECON. BOT. 1970+
 NUT=CRC HANDBOOK OF NUTS

BALLOTA NIGRA L.

"BLACK HOREHOUND"

7-ACETOXYMARRUBIIN PL 411/
 BALLONIGRIN PL 411/
 BALLOTENOL PL 411/
 BALLOTINONE PL 411/
 DELTA-CADINENE 10 PL BML
 CARYOPHYLLENE 35 PL BML
 COPAENE 19 PL BML
 EO 300 PL BML
 GERMACRENE-D 127 PL BML
 ALPHA-HUMULENE 8 PL BML
 LINALOOL 3 PL BML
 MARRUBIIN PL 411/
 1-OCTEN-3-OL 4 PL BML
 ALPHA-PINENE 3 PL BML
 BETA-PINENE 1 PL BML
 SABINENE 4 PL BML

BANISTERIOPSIS CAAPI (SPRUCE) MORTON

"AYAHUASCA" "CAAPI"

ACETYL-NORHARMINE BK CRC
 DIHYDROSHIHUNINE PL CRC
 N,N-DIMETHYLTRYPTAMINE BK CRC
 HARMALINE SD ALK
 HARMALINIC-ACID PL CRC
 HARMALOL PL CRC
 HARMIC-ACID-METHYL-
 METHYLESTER PL CRC

HARMIC-AMIDE BK CRC
 HARMINE-N-OXIDE PL CRC
 HARMINES 22,000 BK CRC
 HARMINES 11,000 WD CRC
 5-HYDROXY-N,N-
 DIMETHYLTRYPTAMINE BK CRC
 KETO-TETRAHYDRO-NORHARMINE
 BK CRC
 5-METHOXY-N,N-
 DIMETHYLTRYPTAMINE BK CRC
 N-METHYLTRYPTAMINE BK CRC
 SAPONIN 6,600 BK CRC
 SHIHUNINE PL CRC
 TELEPATHINE PL JSG
 TETRAHYDROHARMINE LF ALK

BAPTISIA TINCTORIA R. BR.

“WILD INDIGO”

ANAGYRINE
 BAPTISINE RT HHB
 BAPTISOL LF HHB
 BIOCHANIN-A PL 411/
 BIOCHANIN-A-7-O-
 RHAMNOGLUCOSIDE
 CYTISINE LF RT ST HHB
 GENISTEIN LF
 GENISTEIN-7-O-RHAMNOGLUCOSIDE
 GUM
 13-HYDROXYSPARTEINE
 LUTEOLIN
 LUTEOLIN-7-O-RHAMNOGLUCOSIDE
 METHYL-CYTISINE LF ST HHB
 OROBOL
 OROBOL-7-O-RHAMNOGLUCOSIDE
 PSEUDOBAPTIGENIN LF RT
 PSEUDOBAPTIGENIN-7-O-
 RHAMNOGLUCOSIDE
 RESIN
 SCOPOLETIN
 SCOPOLETIN-7-O-GLUCOSIDE
 SPARTEINE PL JSG
 TECTORIGENIN LF HHB

BAROSMA BETULINA (BERG.)

BARTL. & WENDL. f.

“BUCHU”

8-ACETYLTHIO-P-MENTHAN-3-ONE EO
 CRC
 ALUMINUM 1,360 LF PED
 ASCORBIC-ACID 4,900 LF PED
 ASH 81,000 LF PED

BAROSMA-CAMPHOR 1,800-3,000 LF
 HHB
 CALCIUM 38,800 LF PED
 CAMPHENE LF HHB
 CHROMIUM 29 LF PED
 COBALT 87 LF PED
 P-CYMOL EO HHB
 DIOSMIN 200-500 LF HHB
 DIOSPHENOL 1,800-3,600 LF HHB 411/
 DIPENTENE EO CRC
 EO 15,000-35,000 LF CRC HHB 411/
 2-EPI-P-MENTHANE-8-THIOL-1-ONE PL
 JSG
 HESPERIDIN 10,000-34,000 LF HHB
 IRON 867 LF PED
 (-)-ISOMENTHONE 5,250-8,750 LF HHB
 (-)-ISOPULEGONE 450-900 LF 411/
 (+)-LIMONENE 1,500-2,500 LF HHB
 MAGNESIUM 2,210 LF PED
 MANGANESE 675 LF PED
 P-MENTHANE-8-THIOL-1-ONE PL JSG
 (+)-MENTHONE 1,350-2,250 LF HHB
 L-MENTHONE EO CRC
 8-MERCAPTO-P-MENTHA-3-ONE LF
 411/
 MUCILAGE LF CRC
 MYRCENE LF HHB
 NIACIN 42 LF PED
 PHOSPHORUS 6,780 LF PED
 ALPHA-PINENE LF HHB
 DL-PIPERITONEPOXIDE 1,425-2,375 LF
 HHB
 POTASSIUM 11,700 LF PED
 PROTEIN 92,000 LF PED
 (-)-PULEGONE 1,650-2,750 LF HHB
 (+)-PULEGONE 1,500-3,000 LF 411/
 QUERCETIN PL 411/
 QUERCETRIN-3,7-GLUCOSIDE EO CRC
 RESIN 50,000 LF CRC
 RIBOFLAVIN 1.1 LF PED
 RUTIN EO CRC
 SELENIUM 70 LF PED
 SILICON 43 LF PED
 SODIUM 2,760 LF PED
 ALPHA-TERPINENE LF HHB
 GAMMA-TERPINENE LF HHB
 4-TERPINEOL LF HHB
 THIAMIN 7-19 LF HHB PED
 TIN 11 LF PED
 ZINC 84 LF PED

This may be generic, rather than specific.

Data mostly derived from AYL, HHB, and
 411/

BASELLA ALBA L.**"VINESPINACH"**

ALANINE 750-10,870 LF USA
 ARGININE 700-10,145 LF USA
 ASCORBIC-ACID 1,020-14,785 LF USA
 ASH 14,000-202,900 LF USA
 ASPARTIC-ACID 1,080-15,650 LF USA
 CALCIUM 1,090-15,800 LF USA
 CARBOHYDRATES 34,000-492,750 LF USA
 BETA-CAROTENE 48-695 LF USA
 P-COUMARIC-ACID PL JLS58:121
 CYSTINE 270-3,915 LF USA
 FAT 3,000-43,475 LF USA
 FERULIC-ACID PL JLS58:121
 FIBER 7,000-101,450 LF USA
 GLUTAMIC-ACID 2,830-41,015 LF USA
 GLYCINE 670-9,710 LF USA
 HISTIDINE 390-5,650 LF USA
 IRON 12-175 LF USA
 ISOLEUCINE 530-7,680 LF USA
 KILOCALORIES 190-2,753 LF USA
 LEUCINE 1,010-14,640 LF USA
 LYSINE 860-12,465 LF USA
 METHIONINE 190-2,755 LF USA
 NIACIN 5-70 LF USA
 PHENYLALANINE 850-12,320 LF USA
 PHOSPHORUS 520-7,535 LF USA
 PROLINE 700-10,145 LF USA
 PROTEIN 18,000-260,870 LF USA
 QUERCETIN PL JLS58:121
 SERINE 570-8,260 LF USA
 THIAMIN 0.5-7 LF USA
 THREONINE 550-7,970 LF USA
 TRYPTOPHAN 280-4,060 LF USA
 TYROSINE 480-6,955 LF USA
 VALINE 650-9,420 LF USA
 WATER 931,000 LF USA

BELAMCANDA CHINENSIS (L.)
DC.**"LEOPARD LILY"**

ARSENIC 0.12 RH CAL
 BELAMCANDIN RH WOI
 CALCIUM 6,170 RH CAL
 COPPER 6 RH CAL
 IRIDIN RH CCO
 IRIGENIN PL JSG
 IRON 150 RH CAL
 MAGNESIUM 970 RH CAL
 MANGANESE 13 RH CAL

PENTAHYDROXY-MONOMETHOXY-
 ISOFLAVONE RH WOI
 POTASSIUM 8,940 RH CAL
 SHEKANNIN RT DAA
 SODIUM 527 RH CAL
 TECTORIDIN 15,000 RH CCO HHB
 TECTORIGENIN RH CCO
 ZINC 17 RH CAL

BENINCASA HISPIDA (THUNB.)
COGN.**"WAXGOURD"**

ASCORBIC-ACID 130-6,750 FR CRC
 ASH 3,000-76,925 FR CRC USA
 CALCIUM 170-4,870 FR CRC USA
 CARBOHYDRATES 29,000-825,000 FR CRC
 BETA-CAROTENE 0-2.5 FR CRC USA
 FAT 1,000-51,280 FR CRC USA
 FIBER 5,000-200,000 FR CRC
 IRON 4-125 FR CRC
 ISOMULTIFLORENYL-ACETATE FR JNP54:1564
 KILOCALORIES 130-3,335 FR USA
 LINOLEIC-ACID 870-22,305 FR USA
 LYSINE 90-2,305 FR USA
 MAGNESIUM 190-4,870 FR USA
 METHIONINE 30-770 FR USA
 MUFA 370-9,485 FR USA
 NIACIN 2-102 FR CRC USA
 OLEIC-ACID 370-9,485 FR USA
 OXALIC-ACID 34 FR WBB
 PALMITIC-ACID 110-2,820 FR USA
 PHOSPHORUS 70-4,870 FR CRC USA
 POTASSIUM 60-28,450 FR CRC USA
 PROTEIN 4,000-125,000 FR CRC
 PUFA 870-22,305 FR USA
 RIBOFLAVIN 0.1-28 FR CRC USA
 SFA 160-4,100 FR USA
 SODIUM 50-1,500 FR CRC
 STEARIC-ACID 50-1,280 FR USA
 THIAMIN 0-10 FR CRC
 TRYPTOPHAN 20-515 FR USA
 WATER 958,000-962,000 FR CRC

BERBERIS VULGARIS L.**"BARBERRY"**

ALUMINUM 489 RT PED
 ASCORBIC-ACID 0 RT PED
 ASH 100,000 RT PED
 BERBAMINE PL 411/

BERBERINE 10,000-30,000
 BERBERUBINE PL 411/
 BERCULCINE
 BERVULCINE PL 411/
 CAFFEIC-ACID PL JLS58:123
 CALCIUM 19,100 RT PED
 CAPSANTHIN FR
 CARBOHYDRATES 791,000 RT PED
 BETA-CAROTENE 0 RT PED
 CHELIDONIC-ACID PL 411/
 CHROMIUM 12 RT PED
 CHRYSANTHEMUMXANTHIN
 CITRIC-ACID
 COBALT 42 RT PED
 COLUMBAMINE PL 411/
 COLUMBIANINE PL JSG
 FAT 43,000 RT PED
 FIBER 134,000 RT PED
 FLAVOXANTHIN FR
 FRUCTOSE
 GLUCOSE
 HYDRASTINE
 IRON 1,410 RT PED
 ISOTETRANDRINE PL 411/
 JATTRORRHIZINE PL 411
 KAEMPFEROL? PL JLS58:123
 KILOCALORIES 3,120 RT PED
 LUTEIN
 MAGNESIUM 1,430 RT PED
 MAGNOFLORINE PL 411/
 MALIC-ACID
 MANGANESE 60 RT PED
 NIACIN 81 RT PED
 OXYACANTHINE PL 411/
 PALMATINE PL 411/
 PECTOSE
 PHOSPHORUS 450 RT PED
 POTASSIUM 4,370 RT PED
 PROTEIN 66,000 RT PED
 QUERCETIN? PL JLS58:123
 RESIN
 RIBOFLAVIN 9.4 RT PED
 SELENIUM 34 RT PED
 SILICON 23 RT PED
 SINAPIC-ACID PL JLS58:123
 SODIUM 350 RT PED
 TANNIN PL 411/
 TARTARIC-ACID
 THIAMIN 10 RT PED
 TIN 26 RT PED
 VULVRACINE PL 411/
 YATRICINE
 ZEAXANTHIN
 ZINC TR RT PED

BERTHOLLETIA EXCELSA
HUMB. & BONPL.
"BRAZILNUT"

ALANINE 5,700-5,897 SD USA
 ALUMINUM 5 SD FUR 5/
 ANTIMONY 0.1 SD FUR 5/
 ARGININE 23,900-24,727 SD USA
 ARSENIC 0.02 SD FUR 5/
 ASCORBIC-ACID 7 SD USA
 ASH 31,840-35,342 SD USA
 ASPARTIC-ACID 13,550-14,019 SD USA
 BARIUM 1,764-2,600 SD FUR HHB
 BORON 2.7 SD FUR
 BROMINE 87 SD FUR
 CADMIUM 0.03 SD FUR
 CALCIUM 1,592-1,820 SD USA FUR 5/
 CARBOHYDRATES 128,000-132,429 SD
 USA
 BETA-CAROTENE 0 SD USA
 CERIUM 1.2 SD FUR
 CESIUM 1.3 SD FUR
 CHLORINE 246 SD FUR
 CHROMIUM 0.6 SD FUR
 COBALT 1.9 SD FUR
 COPPER 18 SD USA
 CYSTINE 3,490-3,611 SD USA
 EUROPIUM 0.1 SD FUR
 FAT 649,190-700,000 SD HHB USA
 FIBER 21,160-25,492 SD USA
 FLUORINE 1.7 SD FUR
 FOLACIN 0 SD USA
 GADOLEIC-ACID 620-641 SD USA
 GLUTAMIC-ACID 31,510-32,600 SD USA
 GLYCINE 6,570-6,797 SD USA
 HISTIDINE 4,020-4,159 SD USA
 IODINE 0.2 SD FUR
 IRON 34-93 SD USA FUR 5/
 ISOLEUCINE 6,010-6,218 SD USA
 KILOCALORIES 6,560-6,787 SD USA
 LANTHANUM 0.1 SD FUR
 LECITHIN 60,000-105,000 SD EST JAD
 LEUCINE 11,870-12,281 SD USA
 LINOLEIC-ACID 140,225-314,300 SD
 HHB USA
 ALPHA-LINOLENIC-ACID 620-641 SD
 USA
 LUTETIUM 0.01 SD FUR
 LYSINE 5,410-5,597 SD USA
 MAGNESIUM 2,250-3,370 SD USA
 FUR 5/
 MANGANESE 8 SD USA
 MERCURY 0.01 SD FUR

METHIONINE 10,140-10,346 SD USA
 MYRISTIC-ACID 6,200-12,600 SD HHB
 USA
 NIACIN 16-17 SD USA
 NICKEL 5.8 SD FUR
 OLEIC-ACID 198,000-408,100 SD CRC
 HHB USA
 PALMITIC-ACID 87,630-113,400 SD CRC
 HHB USA
 PALMITOLEIC-ACID 3,240-3,352 SD
 USA
 PANTOTHENIC-ACID 2-3 SD USA
 PHENYLALANINE 7,460-7,718 SD USA
 PHOSPHORUS 6,000-6,208 SD USA
 POTASSIUM 5,405-6,208 SD USA FUR 5/
 PROLINE 7,620-7,884 SD USA
 PROTEIN 138,820-153,100 SD USA
 RIBOFLAVIN 1 SD USA
 SAMARIUM 0.04 SD FUR 5/
 SCANDIUM 0.02 SD FUR 5/
 SELENIUM 3-497 SD FUR JFS47:1595
 SELENOPROTEIN SD CRC
 SERINE 7,460-7,718 SD USA
 SILICON 1,770 SD USA
 SODIUM 7-20 SD USA FUR 5/
 STEARIC-ACID 16,228-72,800 SD HHB
 USA
 STRONTIUM 77 SD FUR
 TANTALUM 0.1 SD FUR 5/
 THIAMIN 10 SD USA
 THREONINE 4,600-4,759 SD USA
 TIN 3.5 SD FUR 5/
 TITANIUM 6.1 SD FUR 5/
 TRYPTOPHAN 2,600-2,690 SD USA
 TUNGSTEN 0.1 SD FUR
 TYROSINE 4,570-4,728 SD USA
 VALINE 9,110-9,425 SD USA
 VANADIUM 0.01 SD FUR
 VIT-B6 2-3 SD USA
 WATER 32,860-38,770 SD USA
 YTTERBIUM 0.2 SD FUR 5/
 ZINC 41-53 SD USA FUR 5/

5/Fur = Furr et al, 1979.

BETA VULGARIS L.

“BEET”

“SWISS CHARD”

ACETAMIDE RT HHB
 ACONITIC-ACID PL HHB
 ADENINE RT HHB
 ADIPIC-ACID RT HHB
 ALANINE 560-4,338 RT USA

ALLANTOIN RT HHB
 ALUMINUM 1-420 RT AAS USG
 L-ARABINOSE TH HHB
 ARGININE 380-2,997 RT USA
 ARSENIC 0.01-0.08 RT AAS
 ASCORBIC-ACID 120-3,696 LF CRC
 ASCORBIC-ACID 50-868 RT CRC USA
 ASH 15,000-250,000 LF CRC
 ASH 7,600-140,000 RT AAS CRC USA
 USG
 ASPARTIC-ACID 1,060-8,360 RT USA
 BARIUM 17-70 RT USG
 BETAINE RT HHB
 BETANIDINE RT HHB
 BETANIN PL JSG
 BETANINE RT HHB
 BORON 1-80 RT AAS BOB USG
 BROMINE 2-16 RT AAS
 CADMIUM 0.01-0.33 RT AAS
 CAFFEIC-ACID LF HHB
 CALCIUM 700-17,368 LF CRC
 CALCIUM 120-4,200 RT AAS USA USG
 CARBOHYDRATES 36,000-609,000 LF
 CRC
 CARBOHYDRATES 95,000-794,000 RT
 CRC USA
 BETA-CAROTENE 17-438 RT CRC
 BETA-CAROTENE 0-0.9 RT CRC USA
 CHLOROGENIC-ACID LF HHB
 CHROMIUM 0.001-0.33 RT AAS
 CITRIC-ACID RT HHB
 COBALT 0.001-0.42 RT AAS
 CONIFERIN PL RT SD HHB
 COPPER 0.6-17 RT USA USG
 P-COUMARIC-ACID PL JLS58:120
 CYSTINE 180-1,420 RT USA
 DAUCIC-ACID PL CCO
 DIOXYMALONIC-ACID RT HHB
 FARNESOL EO RT HHB
 FAT 2,000-58,000 LF CRC
 FAT 1,000-16,000 RT CRC USA
 FAT 28,000-70,000 SD HHB
 FERULIC-ACID LF HHB
 FIBER 4,000-279,000 LF CRC
 FIBER 8,000-90,000 RT CRC USA
 FOLACIN 0.8-8 RT USA
 FORMALDEHYDE RT HHB
 GABA RT HHB
 GALACTOSE RT HHB
 GLUCOSE RT HHB
 GLUTAMIC-ACID 3,930-30,994 RT USA
 GLUTARIC-ACID RT HHB
 GLYCINE 290-2,287 RT USA
 GLYCOCEREBROSIDE RT HHB

- GLYOXALIC-ACID SP USA
 GUANINE RT HHB
 GUANOSINE RT HHB
 HETEROXANTHIN RT HHB
 HEXOSANS RT HHB
 HISTIDINE 200-1,577 RT USA
 HOMOGENITISINIC-ACID RT HHB
 HYDANTOIN SP HHB
 P-HYDROXYBENZOIC-ACID RT HHB
 HYDROCAFFEIC-ACID RT HHB
 3-HYDROXYTYRAMINE RT HHB
 HYPOXANTHIN RT HHB
 BETA-INDOLEACETIC-ACID RT HHB
 INVERTASE RT HHB
 IRON 7-392 LF CRC
 IRON 5-165 RT AAS USA USG
 ISOLEUCINE 440-3,470 RT USA
 KAEMPFEROL PL JLS58:120
 KAEMPFEROL-GLYCOSIDE LF HHB
 KILOCALORIES 210-3,310 LF CRC
 KILOCALORIES 430-3,610 RT CRC
 LEAD 0.01-3.5 RT AAS USG
 LEUCINE 630-4,968 RT USA
 LINOLEIC-ACID 460-3,628 RT USA
 ALPHA-LINOLENIC-ACID 316-3,160 LF
 PCO
 ALPHA-LINOLENIC-ACID 40-315 RT
 USA
 LITHIUM 0.36-0.6 RT USG
 LYSINE 530-4,180 RT USA
 MAGNESIUM 130-4,200 RT AAS USA
 USG
 MANGANESE 3-90 RT AAS USA USG
 MELILOIC-ACID RT HHB
 MERCURY 0.0002-0.016 RT AAS
 METHIONINE 170-1,341 RT USA
 MOLYBDENUM <0.1 RT AAS
 MUFA 270-2,219 RT USA
 NEOBETANIN PL JSG
 NIACIN 4-68 LF CRC
 NIACIN 2-32 RT CRC USA
 NICKEL 0-2.5 RT AAS USG
 NITROGEN 2,600-35,830 RT AAS
 OLEANOLIC-ACID-3-O-BETA-D-
 GLUCOPYRANOSIDE RT HHB
 OLEIC-ACID 270-2,129 RT USA
 ORNITHINE RT HHB
 OXALIC-ACID 404 RT? WBB
 OXYCITRONIC-ACID RT HHB
 D-ALPHA-OXYGLUTARIC-ACID RT
 HHB
 PALMITIC-ACID 210-1,656 RT USA
 PANTOTHENIC-ACID 1.5-11.8 RT USA
 PENTOSANS RT HHB
 PHENYLALANINE 420-3,312 RT USA
 PHOSPHORUS 290-5,946 LF CRC
 PHOSPHORUS 260-45,580 RT AAS CRC
 USA
 PHYTOSTEROLS 250-1,972 RT USA
 POTASSIUM 4,380-61,798 LF CRC
 POTASSIUM 3,033-50,000 RT AAS USA
 PRAEBETANINE RT HHB
 PROLINE 380-2,997 RT USA
 PROTEIN 16,000-270,000 LF CRC
 PROTEIN 12,850-143,000 RT CRC USA
 PROTEIN 110,000-150,000 SD HHB
 PROTOPORPHYRIN RT HHB
 PUFA 500-3,943 RT USA
 QUERCETIN PL JLS58:120
 QUERCETIN-GLUCOSIDE LF HHB
 QUINIC-ACID LF HHB
 RAFFINOSE RT HHB
 RAPHANOL PL RT SD HHB
 RIBOFLAVIN 1.7-26 LF CRC
 RIBOFLAVIN 0.2-3.9 RT CRC USA
 D-RIBULOSE LF HHB
 RUBIDIUM 0.76-32 RT AAS
 SALICYLIC-ACID RT HHB
 SEDOHEPTULOSE LF HHB
 SELENIUM <0.002 RT AAS
 SERINE 540-4,259 RT USA
 SFA 220-1,735 RT USA
 SILICON 1-83 RT AAS
 BETA-SITOSTEROL LF HHB
 SODIUM 1,300-16,571 LF CRC
 SODIUM 590-6,705 RT USA
 ALPHA-SPINASTERYLGLUCOSIDE RT
 HHB
 STEARIC-ACID 10-79 RT USA
 STRONTIUM 16-70 RT USG
 SUCROSE 270,000 RT HHB
 SULFUR 130-2,000 RT AAS
 SYRINGIC-ACID RT HHB
 TARTARIC-ACID RT HHB
 THIAMIN 0.6-14 LF CRC
 THIAMIN 0.1-2.4 RT CRC
 THREONINE 440-3,470 RT USA
 TIN 0.8-2.8 RT USG
 TITANIUM 0.5-9.8 RT USG
 ALPHA-TOCOPHEROL 0.5-3.6 RT TOT
 ALPHA-TOCOPHEROL 321-439 LF CCG
 TRICARBALLYL-ACID LF HHB
 TRYPTOPHAN 170-1,341 RT USA
 TYROSINE 350-2,760 RT USA
 VALINE 520-4,100 RT USA
 VANILLIC-ACID LF HHB
 VANILLIN RT HHB
 VIT-B6 0.5-3.6 RT USA

VULGAXANTHIN-I PL HHB
 VULGAXANTHIN-II PL HHB
 WATER 864,000-926,000 LF CRC
 WATER 865,000-881,340 RT USA
 XYLOSE LF HHB
 ZINC 3-70 RT USA USG
 ZIRCONIUM

AAS=ACTA AGRIC SCAND SUPPL 22
 H2O (RT)=88%; ZMB=8.33 X APB

BETULA LENTA L.

“CHERRY BIRCH”

ASH 77,000 LF CCG
 ALPHA-BETULENOL PL JSG
 BETA-BETULENOL PL JSG
 BETULOL BD HHB
 CARBOHYDRATE 556,000 LF CCG
 EO 40,000-60,000 BD HHB
 EO 2,300-6,000 BK HHB
 FAT 86,000 LF CCG
 FIBER 169,000 LF CCG
 METHYL-SALICYLATE 2,231-5,988 BK
 HHB JFM
 MONOTROPITOSIDE BK HHB
 PROTEIN 281,000 LF CCG

BIXA ORELLANA L.

“ACHIOTE”

“ANNATTO”

ARGININE 14,260 SD ALN33:356
 ASCORBIC-ACID 20-130 FR CRC
 ASH 10,000-64,100 FR CRC
 ASH 54,000 SD CRC
 BIXAGHANENE LF HHB
 BIXEIN SD HHB
 BIXIN 130,000 SD HHB
 BIXOL 220-290 SD CRC HHB
 CALCIUM 70-450 FR CRC
 CALCIUM 970-1,640 SD ALN33:356
 BETA-CAROTENE 0.9-6 FR CRC
 CARBOHYDRATES 143,000-916,666 FR
 CRC
 CROCETIN SD HHB
 CYANIDIN PL JLS58:143
 ELLAGIC-ACID PL JLS58:143
 EO 755-844 SD IP26-132
 FAT 3,000-19,230 FR CRC
 FAT 15,000-50,000 SD CRC ALN33:356
 FIBER 5,000-32,000 FR CRC
 FIBER 158,000-163,000 SD ALN33:356
 HISTIDINE 3,620-3,930 SD ALN33:356

IRON 8-50 FR CRC
 IRON 42-56 SD ALN33:356
 ISHWARANE 5,400 LF PC12:2995 1/
 ISOBIXIN SD HHB
 ISOLEUCINE 5,870-6,380 SD ALN33:356
 KILOCALORIES 540-3,460 FR CRC
 LEUCINE 6,340-8,140 SD ALN33:356
 LYSINE 10,130-14,250 SD ALN33:356
 METHIONINE 1,280-1,660 SD ALN33:356
 NIACIN 3-19 FR CRC
 NITROGEN 24,000-25,200 SD ALN33:356
 NORBIXIN SD HHB
 PHENYLALANINE 4,510-4,650 SD
 ALN33:356
 PHOSPHORUS 100-641 FR CRC
 PHOSPHORUS 2,820-3,490 SD ALN33:356
 PROTEIN 130,000-170,000 SD ALN33:356
 RIBOFLAVIN 0.5-3 FR CRC
 SALICYLIC-ACID AAM8:109
 THREONINE 4,360-7,600 SD ALN33:356
 TOMENTOSIC-ACID PL HHB
 TRYPTOPHAN 1,340-1,680 SD
 ALN33:356
 VALINE 7,620-7,730 SD ALN33:356
 WATER 844,000 FR CRC

1/ASSUMES LEAF CONTAINS 1%
 ESSENTIAL OIL FR=fruit pulp here, the
 red pulp around the seeds. aam=ACTA
 AMAZONICA ALN=ARQ.LAT.NUT.;
 IP=INDIAN PERFUMER

BLECHNUM ORIENTALE L.

“SHIELD FERN; KUAN CHUNG”

ARSENIC 0.02 RH CAL
 CALCIUM 8,280 RH CAL
 COPPER 8 RH CAL
 IRON 70 RH CAL
 MAGNESIUM 2,580 RH CAL
 MANGANESE 28 RH CAL
 POTASSIUM 6,150 RH CAL
 SODIUM 1,930 RH CAL
 ZINC 17 RH CAL

BLETILLA STRIATA (THUNB.)

REICHB. f.

“HYACINTH ORCHID”

ARSENIC 1.35 TU CAL
 CALCIUM 4,400 TU CAL
 COPPER 12 TU CAL
 GLUCOMANNAN TU CCO
 D-GLUCOSE TU CCO

IRON 100 TU CAL
 MAGNESIUM 1,890 TU CAL
 MANGANESE 10 TU CAL
 D-MANNOSE TU CCO
 MERCURY 0.03 TU CAL
 MUCILAGE TU CCO
 POTASSIUM 7,380 TU CAL
 SODIUM 45 TU CAL
 ZINC 16 TU CAL

BLIGHIA SAPIDA KOENIG

“AKEE”

“SESO VEGETAL”

TRANS-ALPHA-AMINO-2-CARBOXYCYCLOPROPANE-ACETIC-ACID PL JSG
 ASCORBIC-ACID 260-1,530 AR CRC JFM
 ASCORBIC-ACID 780-2,735 SD CRC
 ASH 12,000-449,000 AR CRC JFM
 ASH 14,000-104,000 SD CRC
 CALCIUM 400-1,950 AR CRC JFM
 CALCIUM 200-1,300 SD CRC
 CARBOHYDRATES 46,000-225,000 AR CRC JFM
 CARBOHYDRATES 55,000-569,000 SD CRC
 BETA-CAROTENE 5.5-18 AR CRC
 FAT 200,000-649,000 AR CRC
 FAT 12,000-611,000 SD CRC
 FIBER 16,000-81,000 AR CRC JFM
 FIBER 3,000-153,000 SD CRC
 GLYCYLGLYCYLGLYCINE PL JSG
 Y-L-GLUTAMYL-ALPHA-AMINO—B-(2-METHYLENE-CYCLOPROPYL)-PROPIONIC-ACID SD JFM
 HEDERAGENIN PL JSG
 HYPOGLYCIN FR CRC
 IRON 27-130 AR CRC JFM
 IRON 17-173 SD CRC
 KILOCALORIES 1,960-6,360 AR CRC
 KILOCALORIES 640-6,320 SD CRC
 NIACIN 14-88 AR CRC JFM
 NIACIN 16-84 SD CRC
 PHOSPHORUS 160-2,300 AR CRC JFM
 PHOSPHORUS 700-2,455 SD CRC
 PROTEIN 50,000-206,000 AR CRC JFM
 PROTEIN 42,000-267,000 SD CRC
 RIBOFLAVIN 1.4-4.5 AR CRC
 RIBOFLAVIN 0.9-6 SD CRC
 THIAMIN 1.3-4 AR CRC
 THIAMIN 0.7-7 SD CRC
 WATER 576,000-692,000 AR CRC JFM
 WATER 715,000-798,000 SD CRC

BOCCONIA ARBOREA L.

“TREE POPPY”

ALPHA-ALLOCRYPTOPINE PL ALK
 CHELERYTHRINE PL JSG
 DIHYDROSANGUINARINE PL JAG
 11-O-METHYLDIHYDROCHELERYTHRINE PL JSG
 PROTOPINE PL ALK
 PROTOPINE-N-OXIDE PL JSG

BOCCONIA FRUTESCENS L.

“TREE POPPY”

ALPHA-ALLOCRYPTOPINE PL ALK
 BETA-ALLOCRYPTOPINE PL ALK
 CHELERYTHRINE PL ALK
 PROTOPINE PL ALK
 SANGUINARINE WD ALK

BOEHMERIA NIVEA (L.)

GAUDICH.

“RAMIE”

APIGENIN-RHAMNOGLUCOSIDE LF CCO
 ASCORBIC-ACID 730-5,615 LF CRC
 ARSENIC ND PL CPB38:2205
 ASH 21,000-161,540 LF CRC
 ASH 134,000-182,000 SH CRC
 BARIUM 40-46 PL CPB38:2205
 BROMINE 8-14 PL CPB38:2205
 CALCIUM 36,000-39,000 PL CPB38:2205
 CALCIUM 4,500-46,000 SH CRC
 CARBOHYDRATES 71,000-546,150 LF CRC
 CARBOHYDRATES 473,000-606,000 SH CRC
 BETA-CAROTENE 52-403 LF CRC
 CELLULOSE 659,000 ST WOI
 CHLORINE 10,000-12,000 PL CPB38:2205
 CHLOROGENIC-ACID LF CCO
 CHROMIUM 16 PL CPB38:2205
 COPPER 13 PL CPB38:2205
 EMODIN RT CCO
 FAT 5,000-38,460 LF CRC
 FAT 32,000-44,000 SH CRC
 FIBER 24,000-184,615 LF CRC
 FIBER 119,000-259,000 SH CRC
 IODINE ND PL CPB38:2205
 IRON 16-123 LF CRC
 IRON 1,500-3,500 PL CPB38:2205
 KILOCALORIES 380-2,923 LF CRC

LEAD ND PL CPB38:2205
 LIGNIN 14,600 ST WOI
 MANGANESE 80-140 PL CPB38:2205
 MOLYBDENUM ND PL CPB38:2205
 NIACIN 7-54 LF CRC
 NIACIN 67 SH CRC
 NICKEL ND PL CPB38:2205
 PHOSPHORUS 450-3,460 LF CRC
 PHOSPHORUS 270-700 PL CPB38:2205
 PHOSPHORUS 1,400-2,400 SH CRC
 PHYSCION-8-BETA-GLUCOSIDE RT
 CCO
 POTASSIUM 1,100-1,300 PL CPB38:2205
 PROTEIN 33,000-253,850 LF CRC
 PROTEIN 219,000-301,000 SH CRC
 RHOIFOLIN LF CCO
 RIBOFLAVIN 2.8-22 LF CRC
 RIBOFLAVIN 16 SH CRC
 RUBIDIUM 13-14 PL CPB38:2205
 STRONTIUM 90-118 PL CPB38:2205
 SULFUR 3,000-3,700 PL CPB38:2205
 THIAMIN 0.3-2.3 LF CRC
 THIAMIN 7 SH CRC
 TITANIUM 110-230 PL CPB38:2205
 WATER 870,000 LF CRC
 WATER 105,000 ST WOI
 ZINC 32-43 PL CPB38:2205

BORAGO OFFICINALIS L.

"BORAGE"

ACETIC-ACID
 ALLANTOIN SP HHB
 ALKALOIDS 2-98
 AMABILINE LF 411/
 ARABINOSE PL HHB
 ASCORBIC-ACID 30-5,005 LF HHB USA
 (-)-BORNESITOL PL HHB
 CALCIUM 930-5,005 LF USA
 CARBOHYDRATES 30,600-437,580 LF
 USA
 BETA-CAROTENE 25-360 LF USA
 CHOLINE LF 411/
 COBALT
 DHURRIN RIZK
 FAT 7,000-100,000 LF
 FAT 383,000 SD CRC
 FIBER 9,200-131,560 LF USA
 GALACTOSE PL HHB
 GLUCOSE PL HHB
 HYDROXYPROLINE SD HHB
 INTERMEDINE LF 411/
 IRON 33-472 LF USA
 LACTIC ACID

GAMMA-LINOLENIC-ACID SD JAD
 LYCOPSAMINE LF 411/
 MAGNESIUM 520-7,436 LF USA
 MALIC-ACID
 MUCILAGE 300,000 PL HHB
 NIACIN 9-129 LF USA
 PHOSPHORUS 530-7,579 LF USA
 POTASSIUM 4,700-67,210 LF USA
 PROTEIN 18,000-257,400 LF USA
 PROTEIN 209,000 SD CRC
 PYRROLIZIDINES 2-10 PL 411/
 RESIN
 RIBOFLAVIN 1-21 LF USA
 ROSMARINIC-ACID 500-7,000 PL
 FT62:166
 SILICIC-ACID 15,000-22,000 PL HHB
 SODIUM 800-11,440
 SUPININE LF 411/
 SUPININE-VIRIDIFLORATE
 TANNIN 30,000 PL HHB
 THIAMIN 1-9 LF USA
 WATER 0-930,000 HE USA
 ZINC ABS

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 1988.

BORONIA MEGASTIGMA NEES *EX BARTL.*

"SCENTED BORONIA"

CAPRYLIC-ACID FL GEO
 ETHANOL FL GEO
 ETHYL-FORMATE FL GEO
 EO 4,000-8,000 FL AYL
 EUGENOL FL AYL
 FORMIC-ACID FL GEO
 HEPTACOSANE
 BETA-IONONE 3,800-7,600 FL AYL
 D-ALPHA-IONONE 200 FL AYL
 D-L-ALPHA-IONONE 200 FL GEO
 PALMITIC-ACID FL GEO
 PALMITIC-ACID-ESTER FL GEO
 PHENOLS FL GEO
 PHYTOSTEROLS FL GEO
 STEARIC-ACID-ESTER FL GEO
 TRIACONTANE FL GEO

BOSWELLIA CARTERI *BIRDWOOD*

"OLIBANUM"

ACETYL-BETA-BOSWELLIC-ACID PL
 JSG

ANISALDEHYDE EO BML
 ARABINOSE EXUDATE AYL
 AROMADENDRENE EO BML
 ALLO-AROMADENDRENE EO BML
 BASSORIN 50,000-80,000 EXUDATE
 AYL
 TRANS-ALPHA-BERGAMOTENE EO
 BML
 BORNEOL EO BML
 D-BORNEOL EO GEO
 ALPHA-BOSWELIC-ACID EXUDATE
 AYL
 BETA-BOSWELIC-ACID RE CCO
 3-ACETYL-BETA-BOSWELIC-ACID
 EXUDATE AYL
 BETA-BOURBONENE EO BML
 CADINENE EO GEO
 BETA-1-CADINENE EO BML
 DELTA-CADINENE EO BML
 GAMMA-CADINENE EO BML
 ALPHA-CALACORENE EO BML
 CALAMENENE EO BML
 CARVONE EO BML
 CARYOPHYLLENE EO BML
 ALPHA-COPAENE EO BML
 BETA-COPAENE EO BML
 ALPHA-CUBEENE EO BML
 P-CYME NE 3,925 EO GEO
 4,23-DIHYDROROBURIC-ACID PL JSG
 DIPENTENE 3,925 EO GEO
 BETA-ELEMENE EO BML
 DELTA-ELEMENE EO BML
 EO 30,000-100,000 EXUDATE AYL
 ETHYL-LAURATE EO BML
 FARNESANE EO BML
 FARNESENE EO BML
 FARNESOL EO BML
 GALACTOSE EXUDATE AYL
 ALPHA-GUAIENE EO BML
 BETA-GUAIENE EO BML
 DELTA-GUAIENE EO BML
 ALPHA-GURJUNENE EO BML
 HOMOMYRCENE EO BML
 ALPHA-HUMULENE EO BML
 BETA-HUMULENE EO BML
 INCENSOLE EO AYL
 INCENSOLE-ACETATE EO AYL
 INCENSOLE-OXIDE EO AYL
 ISOINCENSOLE EO AYL
 ISOINCENSOLE-OXIDE EO AYL
 (S)-1-ISOPROPYL-4,8,12-
 TRIMETHYLCYCLOTETRADECA-
 3E,7,11E-TRIEN-1-OL JSG

11-KETO-ALPHA-BOSWELIC-ACID PL
 JSG
 LIMONENE EO BML
 P-MENTHA-1,5-DIEN-7-OL EO BML
 4-O-METHYLGLUCURONIC-ACID
 EXUDATE AYL
 MUCILAGE 120,000 EXUDATE HHB
 ALPHA-MUUROLENE EO BML
 GAMMA-MUUROLENE EO BML
 MYRCENE EO BML
 OCTANOL EO AYL
 OCTYL-ACETATE EO AYL
 PHELLANDRENE EO GEO
 ALPHA-PHELLANDRENE EO GEO
 BETA-PHELLANDRENE EO BML
 L-ALPHA-PINENE EO GEO
 TRANS-PINOCARVEOL EO BML
 RESIN 600,000-700,000 EXUDATE AYL
 SABINENE EO BML
 SELINA-4,11-DIENE EO BML
 ALPHA-SELINENE EO BML
 BETA-SELINENE EO BML
 TERPENES 785,000 EO GEO
 TERPINEN-4-OL EO BML
 GAMMA-TERPINENE EO BML
 TERPINOLENE EO BML
 ALPHA-TERPINYL-ACETATE EO BML
 ALPHA-THUJENE EO BML
 THUJOPSENE EO BML
 VERBENOL EO GEO
 TRANS-VERBENOL EO BML
 VERBENONE EO GEO
 ALPHA-YLANGENE EO BML
 BETA-YLANGENE EO BML

BOWIEA VOLUBILIS HARV.

"CLIMBING ONION"
 "ZULU POTATO"

BOVOCHRYSOID 50 BU HHB
 BOVOCRYPTOSIDE 6 BU HHB
 BOVOCYANOTOXIN BU HHB
 BOVOEOLOTOXIN BU HHB
 BOVOERYTHROTOXIN PL HHB
 BOVOGENINS PL JSG
 BOVOPURPUROSIDE 14 BU HHB
 BOVORUBOSIDE 20 BU HHB
 BOVOSIDES BU CRC
 BOVOSIDE-A 100 BU HHB
 BOVOSIDE-B 2 BU HHB
 BOVOSIDE-C 10=1002 BU HHB
 BOVOXANTHOTOXIN 60 BU HHB

BUFODIANOLIDE BU HHB
 GLUCOBOVOSIDE-A 220 BU HHB
 HELLEBRIGENIN BU CRC
 KILIMANDSCHAROGENIN-A BU HHB
 KILIMANDSCHAROGENIN-B BU HHB
 KILIMANDSCHAROTOXIN BU HHB
 NABOGENIN BU HHB
 SCILLIGLAUCOSIDIN BU CRC
 SINISTRIN 100,000 BU CRC

BRASSICA CHINENSIS L.

"PAK-CHOI; CHINESE CABBAGE"

ALANINE 860-18,378 LF USA
 ARGININE 840-17,951 LF USA
 ASCORBIC-ACID 450-9,713 LF USA
 ASH 8,000-170,960 LF USA
 ASPARTIC-ACID 1,080-23,080 LF USA
 CALCIUM 1,050-22,440 LF USA
 CARBOHYDRATES 21,800-465,866 LF
 USA
 BETA-CAROTENE 18-385 LF USA
 CYSTINE 170-3,633 LF USA
 FAT 2,000-42,740 LF USA
 FIBER 6,000-128,220 LF USA
 GLUTAMIC-ACID 3,600-76,932 LF USA
 GLYCINE 430-9,189 LF USA
 HISTIDINE 260-5,556 LF USA
 IRON 8-171 LF USA
 ISOLEUCINE 850-18,164 LF USA
 KILOCALORIES 130-2,778 LF USA
 LEUCINE 880-18,806 LF USA
 LINOLEIC-ACID 390-8,334 LF USA
 ALPHA-LINOLENIC-ACID 510-10,899 LF
 USA
 LYSINE 890-19,019 LF USA
 MAGNESIUM 106-5,844 LF USA
 METHIONINE 90-1,923 LF USA
 NIACIN 5-107 LF USA
 OLEIC-ACID 140-2,992 LF USA
 PALMITIC-ACID 220-4,701 LF USA
 PHENYLALANINE 440-9,402 LF USA
 PHOSPHORUS 370-7,907 LF USA
 POTASSIUM 1,804-69,143 LF USA
 PROLINE 310-6,625 LF USA
 PROTEIN 15,000-320,550 LF USA
 RIBOFLAVIN 0.7-15 LF USA
 SERINE 480-10,258 LF USA
 SODIUM 295-21,477 LF USA
 STEARIC-ACID 10-214 LF USA
 THIAMIN 0.4-9 LF USA
 THREONINE 490-10,471 LF USA
 ALPHA-TOCOPHEROL 2-56 LF TOT

TRYPTOPHAN 150-3,206 LF USA
 TYROSINE 290-6,197 LF USA
 VALINE 660-14,104 LF USA
 WATER 950,000-956,400 LF USA

BRASSICA JUNCEA (L.)

CZERNJ. & COSSON

"MUSTARD GREENS"

ALLYL-ISOTHIOCYANATE SD WOI
 ASH 10,000-108,695 LF JAF38:2137
 ASH 53,000-56,500 SD WOI
 CALCIUM 512-5,565 LF JAF38:2137
 COPPER 1.3-14 LF JAF38:2137
 CROTONYL-ISOTHIOCYANATE SD
 WOI
 EO 4,500-30,900 SD WOI
 FAT 12,700-138,000 LF JAF38:2137
 FAT 300,000-380,000 SD WOI
 FIBER 80,000-85,300 SD WOI
 GLYCOLIPIDS 3,225-35,055 JAF38:2137
 IRON 16-174 LF JAF38:2137
 MAGNESIUM 353-3,837 LF JAF38:2137
 24-METHYLENE-25-
 METHYLCHOLESTEROL PL JSG
 OXALIC-ACID 1,287 LF WBB
 PHOSPHOLIPIDS 5,588-60,740
 JAF38:2137
 PROTEIN 28,300-307,600 LF JAF38:2137
 WATER 908,000 LF JAF38:2137
 WATER 62,000 SD WOI
 ZINC 6-65 LF JAF38:2137

BRASSICA NAPUS L. var.

NAPOBRASSICA (L.) Reichb.

"RUTABAGA"

ALANINE 330-3,190 RT USA
 ALLANTOIC-ACID RT HHB
 ALLANTOIN RT HHB
 ALUMINUM 0.3-1 RT AAS
 ARGININE 1,480-14,310 RT USA
 ARSENIC <0.01 RT AAS
 ASCORBIC-ACID 250-2,415 RT USA
 ASPARTIC-ACID 870-8,410 RT USA
 ASH 5,700-90,000 RT AAS
 BORON 52 LF JPN14:613
 BORON 2.5-30 RT AAS
 BORON 24 ST JPN14:613
 BROMINE <1 RT AAS
 CADMIUM 0.004-0.1 RT AAS
 CALCIUM 270-6,040 RT AAS USA

CARBOHYDRATES 81,300-786,171 RT USA
 BETA-CAROTENE 0 RT USA
 CHROMIUM 0.005-0.1 RT AAS
 COBALT 0.001-0.1 RT AAS
 COPPER 0.2-4 RT AAS
 CYSTINE 110-1,065 RT USA
 FAT 2,000-19,340 RT USA
 FIBER 11,000-106,370 RT USA
 FLUORINE <0.1 RT AAS
 FOLACIN 0.18-2 RT USA
 GLUTAMIC-ACID 1,420-13,730 RT USA
 GLYCINE 270-2,610 RT USA
 HEXADECATRIEN-(7,10,13)-ACID-1 LF HHB
 HISTIDINE 300-2,900 RT USA
 IRON 2-62 RT AAS USA
 ISOLEUCINE 500-4,835 RT USA
 KILOCALORIES 360-3,600 RT USA
 LEAD 0.01-0.3 RT AAS
 LEUCINE 380-3,675 RT USA
 LINOLEIC-ACID 350-3,385 RT USA
 LINOLENIC-ACID 530-5,125 RT USA
 LYCOPENE RT HHB
 LYSINE 390-3,770 RT USA
 MAGNESIUM 110-2,610 RT AAS USA
 MANGANESE 1.3-17 RT AAS
 MERCURY 0.0004-0.01 RT AAS
 METHIONINE 100-965 RT USA
 MOLYBDENUM 0.65 LF JPN14:613
 MOLYBDENUM 0.32 ST JPN14:613
 MOLYBDENUM <0.1 RT AAS
 MUFA 250-2,500 RT USA
 NIACIN 7-68 RT USA
 NICKEL 0.02-1 RT AAS
 NITROGEN 1,500-25,000 RT AAS
 OLEIC-ACID 250-2,415 RT USA
 PALMITIC-ACID 240-2,320 RT USA
 PANTOTHENIC-ACID 2-15 RT USA
 PHENYLALANINE 310-3,000 RT USA
 PHOSPHORUS 290-7,250 RT AAS USA
 POTASSIUM 2,200-43,850 RT AAS USA
 PROTEIN 12,000-116,040 RT USA
 PUFA 880-8,800 RT USA
 RIBOFLAVIN 0.4-4 RT USA
 RUBIDIUM 1-10 RT AAS
 SELENIUM 0.031 LF JPN14:613
 SELENIUM 0.017 ST JPN14:613
 SELENIUM <0.002 RT AAS
 SERINE 350-3,385 RT USA
 SFA 270-2,700 RT USA
 SILICON 1-30 RT AAS
 SODIUM 200-1,930 RT USA
 STEARIC-ACID 30-290 RT USA

SULFUR 350-5,000 RT AAS
 THIAMIN 1-9 RT USA
 THREONINE 460-4,445 RT USA
 TRYPTOPHAN 130-1,255 RT USA
 TYROSINE 230-2,225 RT USA
 VALINE 480-4,640 RT USA
 VIT-B6 1-10 RT USA
 WATER 891,260-901,940 RT USA
 ZINC 1.7-33 RT AAS USA

AAS=ACTA AGRICUL SCAND SUPPL 22;
 H2O=90%; ZMP = 10 X APB

BRASSICA NIGRA (L.) Koch

“BLACK MUSTARD”

ALLYL-CYANIDE SD HHB
 ALLYL-ISOTHIOCYANATE 6,510-11,760 SD WOI
 ALLYL-RHODANIDE SD HHB
 ARGININE 1,810-26,657 LF USA
 ASCORBIC-ACID 234-4,013 LF USA
 ASH 50,000-54,112 SD WOI
 ASH 5,830-99,722 LF USA
 CAFFEIC-ACID SD CRC(FNS)
 CALCIUM 1,107-17,867 LF USA
 CARBOHYDRATES 192,000-207,792 SD WOI
 CARBOHYDRATES 34,100-502,209 LF USA
 BETA-CAROTENE 29-475 LF USA
 CHLOROGENIC-ACID SD CRC(FNS)
 TRANS-CINNAMIC-ACID SD CRC(FNS)
 COPPER 0.58-11.2 LF USA
 P-COUMARIC-ACID SD CRC(FNS)
 CYSTINE 370-5,449 LF USA
 EO 7,000-12,000 SD WOI
 ERUCIC-ACID 770-11,340 LF USA
 FAT 282,000-305,195 SD WOI
 FAT 2,220-46,841 LF USA
 FERULIC-ACID SD CRC(FNS)
 FIBER 110,000-119,048 SD WOI
 FIBER 8,000-117,820 LF USA
 GADOLEIC-ACID 260-3,829 LF USA
 HISTIDINE 450-6,627 LF USA
 HYDROXYBENZOIC-ACID SD CRC(FNS)
 IRON 12-209 LF USA
 ISOLEUCINE 910-13,402 LF USA
 KILOCALORIES 200-2,946 LF USA
 LEUCINE 760-11,192 LF USA
 LINOLEIC-ACID 270-3,976 LF USA
 ALPHA-LINOLENIC-ACID 240-3,535 LF USA

LYSINE 1,130-16,642 LF USA
 MAGNESIUM 132-2,471 LF USA
 MANGANESE 3-53 LF USA
 MESOINOSITOL-HEXAPHOSPHORIC-
 ACID-ESTER SD HHB
 METHIONINE 230-3,387 LF USA
 MUCILAGE 200,000 SD HHB
 MYROSIN 6,800 SD WOI
 NIACIN 3.03-47.87 LF USA
 OLEIC-ACID 200-2,945 LF USA
 PALMITIC-ACID 60-884 LF USA
 PALMITOLEIC-ACID 10-147 LF USA
 PANTOTHENIC-ACID 0.19-2.79 LF USA
 PHENYLALANINE 660-9,720 LF USA
 PHENYLETHYL-ISOTHIOCYANATE SD
 CCO
 PHOSPHORUS 290-4,563 LF USA
 POTASSIUM 1,485-28,215 LF USA
 PROTEIN 23,650-385,190 LF USA
 PROTOCATECHUIC-ACID SD CRC(FNS)
 RIBOFLAVIN 0.56-9.72 LF USA
 SINAPIC-ACID SD CRC(FNS)
 SINAPIN SD CCO
 SINIGRIN SD CCO
 SODIUM 274-4,506 LF USA
 STEARIC-ACID 20-294 LF USA
 THIAMIN 0.44-7.66 LF USA
 THREONINE 660-9,720 LF USA
 TRYPTOPHAN 270-3,976 LF USA
 TYROSINE 1,320-19,440 LF USA
 VALINE 970-14,286 LF USA
 VANILLIC-ACID SD CRC(FNS)
 WATER 76,000 SD WOI
 WATER 930,030-933,900 LF USA
 ZINC 2-40 LF USA

***BRASSICA OLERACEA* L. var.**
***BOTRYTIS* L.**

“BROCCOLI”

ACETONE LF NAP
 ALANINE 1,180-12,673 LF USA
 ALLYL-ISOTHIOCYANATE LF PAS
 ALUMINUM 1-27 LF AAS
 ALPHA-AMYRIN BD NAP
 BETA-AMYRIN BD NAP
 ARGININE 1,450-15,573 LF USA
 ARSENIC <0.01 LF AAS
 ASCORBIC-ACID 911-10,360 LF PED
 USA
 ASH 2,800-101,708 LF AAS USA
 ASPARTIC-ACID 2,130-22,876 LF USA
 BORON 1-85 LF AAS BOB

BORON 21 ST JPN14:613
 BROMINE <1 LF AAS
 CADMIUM 0.01-0.18 LF AAS
 CAFFEIC-ACID 8 LF CRC(FSN)
 CALCIUM 360-54,247 LF AAS USA
 CARBOHYDRATES 52,400-562,776 LF
 USA
 ALPHA-CAROTENE PL NAP
 BETA-CAROTENE 9-138 LF PED USA
 CHLOROGENIC-ACID LF PAS
 CHLOROPHYLL LF PAS
 CHROMIUM 0.005-0.18 LF AAS
 CINNAMIC-ACID LF PAS
 CITRIC-ACID PL NAP
 COBALT 0.02-0.6 LF AAS
 COPPER 0.68-52 LF AAS USA
 P-COUMARIC-ACID 13 LF CRC(FSN)
 1-O-P-COUMAROYL-BETA-D-GLUCOSE
 LF NAP
 BETA-CRYPTOXANTHIN PL NAP
 CYSTINE 200-2,148 LF USA
 3,3'-DIINDOYL-METHANE LF PAS
 DIMETHYL-DISULFIDE PL NAP
 ETHANOL PL NAP
 FAT 3,160-41,242 LF USA
 FERULIC-ACID 13 LF CRC(FSN)
 TRANS-FERULIC-ACID LF PAS
 1-O-FERULOYL-BETA-D-GLUCOSE LF
 NAP
 FIBER 10,760-122,866 LF USA
 FLUORINE 0.03-0.9 LF AAS
 FOLACIN 0.64-8.4 LF USA
 FUMARIC-ACID PL NAP
 GLUCOBRASSICIN 30-580 LF
 LWT24:361
 GLUCOERUCIN 0-15,020 LF LWT24:361
 GLUCOIBERIN 0-248 LF LWT24:361
 GLUCONAPOLEIFERIN 9-135 LF
 LWT24:361
 GLUCONASTURTIN 0-145 LF
 LWT24:361
 GLUCORAPHANIN 255-8,990 LF
 LWT24:361
 GLUCOSINOLATES 70-2,120 LF
 LWT24:361
 GLUTAMIC-ACID 3,750-40,275 LF USA
 GLYCINE 950-10,203 LF USA
 HEX-CIS-3-EN-1-OL PL NAP
 HEX-CIS-3-ENOL-ACETATE PL NAP
 HEXYL-ACETATE PL NAP
 HISTIDINE 500-5,370 LF USA
 P-HYDROXYBENZOIC-ACID LF PAS
 4-HYDROXYGLUCOBRASSICIN 3-325
 LF LWT24:361

5-HYDROXY-GLUCOBRASSICIN 20 nM/ G LF NAP	PHENYLALANINE 840-9,022 LF USA
INDOLE-3-ACETONITRILE LF PAS	PHOSPHORUS 644-9,090 LF AAS USA
INDOLE-3-CARBINOL LF PAS	PHYTIC-ACID LF PAS
INDOLE-3-CARBOXYLIC-ACID PL NAP	PHYTOSTEROLS
IRON 8-109 LF AAS USA	POTASSIUM 3,178-37,270 LF AAS USA
IOLEUCINE 1,090-11,707 LF USA	PROGOITRIN 0 LF LWT24:361
KILOCALORIES 280-3,007 LF USA	PROLINE 1,140-12,244 LF USA
KAEMPFEROL LF PAS	PROTEIN 28,710-331,159 LF USA
LEAD 0.01-1 LF AAS	QUERCETIN LF PAS
LEUCINE 1,310-14,069 LF USA	QUERCITRIN LF PAS
LINOLEIC-ACID 380-4,081 LF USA	QUINIC-ACID LF NAP
ALPHA-LINOLENIC-ACID 1,290-13,855 LF USA	RIBOFLAVIN 1.1-21 LF PED USA
LYSINE 1,410-15,143 LF USA	RUBIDIUM 1-23 LF AAS
MAGNESIUM 214-3,072 LF USA	RUTIN LF PAS
MALIC-ACID PL NAP	SALICYLIC-ACID LF PAS
MANGANESE 2-80 LF AAS USA	SEC-BUTYL-ISOTHIOCYANATE SD NAP
MERCURY 0.002-0.09 LF AAS	SELENIUM <0.002 LF AAS
METHANOL PL NAP	SELENIUM 0.024 LF JPN14:613
METHIONINE 340-3,652 LF USA	SELENIUM 0.015 ST JPN14:613
1-METHOXY-GLUCOBRASSICIN LF NAP	SERINE 1,000-10,740 LF USA
4-METHOXYGLUCOBRASSICIN 8-580 LF LWT24:361	SILICON 1-90 LF AAS
5-METHOXY-GLUCOBRASSICIN 110 nM/G LF NAP	SINAPIC-ACID 40 LF CRC(FSN)
4-METHOXY-INDOL-3-YL-METHYL- GLUCOSINOLATE LF NAP	1-O-SINAPOYL-BETA-D-GLUCOSE LF NAP
24-METHYLENE-CYCLOARTENOL LF PAS	SINIGRIN PL PAS
N-METHYL-BETA-PHENETHYLAMINE 1.6 PL NAP	BETA-SITOSTEROL PL PAS
1-METHOXY-INDOLE-3- CARBALDEHYDE PL NAP	SODIUM 252-3,091 LF USA
MOLYBDENUM <0.1-3.76 LF AAS JPN14:613	SQUALENE PL PAS
MOLYBDENUM 1.76 ST JPN14:613	STEARIC-ACID 70-752 LF USA
NEOGLUCOBRASSICIN 10-900 LF LWT24:361	STIGMASTEROL PL PAS
NEOGLUCOBRASSICIN 10 nM/G LF NAP	SUCCINIC-ACID PL PAS
NIACIN 6.4-83 LF PED USA	SULFUR 1,200-11,800 LF AAS
NICKEL 0.3-7 LF AAS	THIAMIN 0.6-8 LF USA
NITROGEN 7,000-71,800 LF AAS	THREONINE 910-9,773 LF USA
OLEIC-ACID 240-2,578 LF USA	ALPHA-TOCOPHEROL 7-439 LF CCG TOT
OXALATE 1,900-20,406 LF USA	TRYPTOPHAN 290-3,115 LF USA
PALMITIC-ACID 470-5,048 LF USA	TYROSINE 630-6,766 LF USA
PANTOTHENIC-ACID 5.35-63 LF USA	VALINE 1,280-13,747 LF USA
PENTAN-3-ONE PL NAP	VANILLIC-ACID PL PAS
PENTEN-1-OL PL NAP	VIT-B6 1.6-18 LF USA
PHENETHYL-ISOTHIOCYANATE LF PAS	WATER 890,000-910,230 LF USA
	ZINC 4-118 LF AAS USA

CRC(FSN)=CRIT REV FOOD SCI & NUT
 NAP=NAPRALERT data for var.botrytis,
 in 2-volume AD Little Contract Report.
 except data cited for inflorescence which is
 referred to cauliflower. AAS=ACTA
 AGRIC SCAND SUPPL 22:1980
 H20=89%; ZMB=9.09 X APB

**BRASSICA OLERACEA L. var.
GEMMIFERA DC**

“BRUSSELS-SPROUTS”

ALLYL-ISOTHIOCYANATE SD NAP
 ANTEISO-HEPTACOSAN-1-OL FL NAP
 ANTEISO-MONTANYL-ALCOHOL LF
 NAP
 ANTEPENTACOSAN-1-OL LF NAP
 ARACHIDONIC-ACID 10-71 LF USA
 ARGININE 2,030-14,494 LF USA
 ASCORBIC-ACID 720-6,069 LF USA WOI
 ASH 13,700-97,818 LF USA
 BORON 57 LF JPN14:613
 BORON 21 ST JPN14:613
 CAFFEIC-ACID 34 LF CRC(FSN)
 CALCIUM 395-3,177 LF USA
 CARBOHYDRATES 89,600-639,744 LF
 USA
 BETA-CAROTENE 5-41 LF USA
 CITRIC-ACID LF NAP
 COPPER 1-5 LF USA
 P-COUMARIC-ACID 12 LF CRC(FSN)
 1-O-P-COUMAROYL-BETA-D-GLUCOSE
 LF NAP
 COUMESTROL 400 SH NAP
 CYSTINE 220-1,571 LF USA
 FAT 2,000-28,560 LF USA
 FERULIC-ACID 10 LF CRC(FSN)
 1-O-FERULOYL-BETA-D-GLUCOSE LF
 NAP
 FIBER 15,100-107,814 LF USA
 FOLACIN 0.56-4 LF USA
 FUMARIC-ACID LF NAP
 HEPTACOSAN-1-OL FL NAP
 HEXACOSAN-1-OL LF NAP
 HISTIDINE 760-5,426 LF USA
 2-HYDROXYBUT-3-ENYL-
 GLUCOSINOLATE LF LWT24:361
 INDOLE-3-ACETONITRILE SH NAP
 INDOLE-3-CARBINOL SH NAP
 INDOLE-3-CARBOXALDEHYDE SH NAP
 INDOLE-3-CARBOXYLIC-ACID SH NAP
 INDOYL-3,3'-DIMETHANE-CARBOXY-
 LIC-ACID SH NAP
 IRON 9-136 LF USA
 ISOHEXACOSAN-1-OL LF NAP
 ISOLEUCINE 1,320-9,425 LF USA
 ISOCTACOSAN-1-OL LF NAP
 TRIACONTAN-1-OL LF NAP
 KILOCALORIES 430-3,070 LF USA
 LEUCINE 1,520-10,853 LF USA

LINOLEIC-ACID 450-3,213 LF USA
 ALPHA-LINOLENIC-ACID 990-7,069 LF
 USA
 LYSINE 1,540-10,996 LF USA
 MAGNESIUM 230-1,642 LF USA
 MALIC-ACID LF NAP
 MANGANESE 3-24 LF USA
 METHIONINE 320-2,285 LF USA
 4-METHOXY-INDOL-3-YL-METHYL-
 GLUCOSINOLATE LF NAP
 MOLYBDENUM 0.9 LF JPN14:613
 MOLYBDENUM 0.36 ST JPN14:613
 MONTANYL-ALCOHOL LF NAP
 NIACIN 6-64 LF USA
 OCTACOSAN-1-OL LF NAP
 OLEIC-ACID 190-1,357 LF USA
 OXALATE 3,600-25,704 LF USA
 PALMITIC-ACID 530-3,784 LF USA
 PALMITOLEIC-ACID 20-142 LF USA
 PANTOTHENIC-ACID 3.1-22 LF USA
 PENTACOSAN-1-OL LF NAP
 PHENYLALANINE 980-6,997 LF USA
 PHOSPHORUS 690-4,927 LF USA
 PHYTOSTEROLS 240-1,710 LF USA
 POTASSIUM 3,670-29,343 LF USA
 PROP-2-ENYL-GLUCOSINOLATE LF
 LWT24:361
 PROTEIN 32,580-250,000 LF USA
 QUERCETIN 25 SP PAM
 QUINIC-ACID LF NAP
 RIBOFLAVIN 0.4-10 LF USA
 RUTIN 20 SH NAP
 SEC-BUTYL-ISOTHIOCYANATE SD
 NAP
 SELENIUM 0.024 LF JPN14:613
 SELENIUM 0.012 ST JPN14:613
 SINAPIC-ACID 107 LF CRC(FSN)
 1-O-P-SINAPOYL-BETA-D-GLUCOSE LF
 NAP
 SODIUM 221-1,990 LF USA
 STEARIC-ACID 30-214 LF USA
 SUCCINIC-ACID LF NAP
 TETRACOSAN-1-OL LF NAP
 THIAMIN 1.3-11 LF USA
 THREONINE 1,200-8,568 LF USA
 ALPHA-TOCOPHEROL 4-63 LF JEL
 TOT
 TRIACONTAN-1-OL LF NAP
 TRYPTOPHAN 370-2,642 LF USA
 VALINE 1,550-11,067 LF USA
 VIT-B6 2.2-16 LF USA
 WATER 846,000-945,500 LF USA WOI
 ZINC 10-157 LF USA

BRASSICA OLERACEA L. var.
CAPITATA L.
"CABBAGE"

- ALANINE 420-5,615 LF USA
 ALLYL-CYANIDE PL AME
 ALLYL-GLUCOSINOLATE SD NAP
 ALLYL-ISOTHIOCYANATE 20 LF NAP
 ALUMINUM <1-4,350 LF AAS USG
 AMMONIA(NH₃) 3,800-11,060 LF NAP
 ANILINE 1-4 LF NAP
 ANTHERAXANTHIN LF NAP
 ANTHOXANTHINS SP NAP
 ARGININE 690-9,225 LF USA
 ARSENIC 0.0035-0.0065 LF USG
 ASCORBIC-ACID 190-6,774 LF NAP USA
 ASH 6,000-98,072 (-350,000) LF AAS USA
 USG
 ASPARTIC-ACID 1,190-15,910 LF USA
 BARIUM 1-87 LF USG
 BENZYLAMINE 2.8-3.3 LF NAP
 BENZYL-GLUCOSINOLATE LF AME
 BENZYL-ISOTHIOCYANATE LF AME
 BORON 1-145 LF AAS USG
 BRASSININ 1.3 LF NAP
 BROMINE 0.2-37 LF AAS
 3-BUTENYL-GLUCOSINOLATE LF AME
 3-BUTENYL-ISOTHIOCYANATE LF
 AME
 BUTYL-GLUCOSINOLATE PL AME
 CADMIUM 0.005-0.39 LF AAS USA
 CAFFEIC-ACID >0.5-77 LF CRC(FSN)
 CAFFEIC-ACID-4-O-BETA-GLUCOSIDE
 LF NAP
 4-CAFFOYLQUINIC-ACID PL AME
 CALCIUM 290-7,500 (-75,400) LF AAS
 NAP USA USG
 CARBOHYDRATES 53,700-717,969 LF
 USA
 BETA-CAROTENE 0.6-12 (-326) LF NAP
 USA (PED)
 CARVONE PL AME
 CHLOROGENIC-ACID PL AME
 CHROMIUM 0.001-8.7 LF AAS USG
 CITRIC-ACID LF NAP
 COBALT 0.001-2.9 LF AAS USG
 COPPER 0.3-87 LF AAS USA
 P-COUMARIC-ACID >0.5-9 LF CRC(FSN)
 P-COUMARIC-ACID-O-BETA-D-
 GLUCOSIDE LF NAP
 1-O-P-COUMAROYL-BETA-D-GLUCOSE
 LF NAP
 3-O-(6-O-{TRANS-P-COUMAROYL}-2-O-
 BETA-D-GLUCOPYRANOSYL)-(BETA-
 D-GLUCOPYRANOSYL)- 5-O-BETA-
 D-GLUCOPYRANOSYL)5-O-BETA-D-
 GLUCOPYRANOSYL-CYANIDIN 27 LF
 NAP
 4-P-COUMAROYLQUINIC-ACID PL
 AME
 5-P-COUMAROYLQUINIC-ACID PL
 AME
 CROCETIN LF NAP
 CYANIDIN-3-(P-COUMAROYL)-
 SOPHOROSIDE-5-GLUCOSIDE 200 SP
 NAP
 CYANIDIN-3-(DI-P-COUMAROYL)-
 SOPHOROSIDE-5-GLUCOSIDE 229 SP
 NAP
 CYANIDIN-3,5-DIGLUCOSIDE 229 SP
 NAP
 CYANIDIN-3-(DIFERULYL)-
 SOPHOROSIDE-5-GLUCOSIDE 214 SP
 NAP
 CYANIDIN-3-(DISINAPYL)-
 SOPHOROSIDE-5-GLUCOSIDE 257 SP
 NAP
 CYANIDIN-3-FERULYL-SOPHOROSIDE-
 5-GLUCOSIDE 243 SP NAP
 CYANIDIN-3-MALONYL-SOPHOROSIDE-
 5-GLUCOSIDE 171 SP NAP
 CYANIDIN-3-SINAPYL-SOPHOROSIDE-5-
 GLUCOSIDE 200 SP NAP
 CYANIDIN-3-SOPHOROSIDE-5-GLU-
 COSIDE 257 SP NAP
 1-CYANO-3,4-EPITHIOBUTANE PL AME
 1-CYANO-3,4-EPITHIOPENTANE PL
 AME
 1-CYANO-2,3-EPITHIOPROPANE PL
 AME
 1-CYANO-2-HYDROXY-3-BUTENE PL
 AME
 1-CYANO-4-METHYL-SULFINYL-
 BUTANE PL AME
 1-CYANO-3-METHYL-SULFINYL-
 PROPANE PL AME
 1-CYANO-4-METHYL-THIO-BUTANE LF
 NAP
 1-CYANO-3-METHYL-THIO-PROPANE
 LF NAP
 CYCLOBRASSININ 4.3 LF NAP
 CYSTINE 100-1,337 LF USA
 DEHYDROASCORBIC-ACID SH NAP
 DIINDOLYLMETHANE PL AME
 DIMETHYL-AMINE 2.0-2.8 LF NAP

ERYTHRO-1-CYANO-2-HYDROXY-3,4-
 EPITHIOBUTANE PL AME
 ETHYL-AMINE 1.3 LF NAP
 ETHYL-METHYL-AMINE 0.9 LF NAP
 FAT 1,090-33,559 LF USA
 FERULIC-ACID 4-20 LF CRC(FSN)
 FERULIC-ACID-B-BETA-D-GLUCOSIDE
 LF NAP
 1-O-FERULOYL-BETA-D-GLUCOSE LF
 NAP
 3-O-(6-O-{TRANS-FERULYL})-2-O-BETA-
 D-GLUCOPYRANOSYL)-(BETA-D-
 GLUCOPYRANOSYL)-5-O- BETA-D-
 GLUCOPYRANOSYL)-5-O-BETA-D-
 GLUCOPYRANOSYL-CYANIDIN 0.2
 LF NAP
 5-FERULOYLQUINIC-ACID PL AME
 FIBER 6,000-106,960 LF NAP USA
 FLUORINE 0.02-2.5 LF AAS
 FOLACIN 0.45-9 LF USA
 FUMARIC-ACID LF NAP
 GLUCOBRASSICIN PL AME
 GLUCOBRASSICANAPIN SD (0.1
 UMOL/G DEFATTED SEED)
 GLUCOIBERIN LF NAP
 GLUCONAPIN SD (2.3 UMOL/G
 DEFATTED SEED)
 3-O-(2-O-{BETA-D-
 GLUCOPYRANOSYL})-6-O-(4-O-{BETA-
 D-GLUCOPYRANOSYL})-5-O-BETA-D-
 GLUCOPYRANOSYL)-5-O-BETA-D-
 GLUCOPYRANOSYL)-CYANIDIN 16
 LF NAP
 3-O-(2-O-{BETA-D-
 GLUCOPYRANOSYL})-6-O-(4-O-{BETA-
 D-GLUCOPYRANOSYL})TRANS-P-
 COUMARYL)-BETA-D-
 GLUCOPYRANOSYL)-5-O-BETA-D-
 GLUCOPYRANOSYL)-CYANIDIN 0.3
 LF NAP
 3-O-(2-O-{BETA-D-
 GLUCOPYRANOSYL})-6-O-(4-O-{BETA-
 D-GLUCOPYRANOSYL})TRANS-
 FERULYL)- BETA-D-
 GLUCOPYRANOSYL)-5-O-BETA-D-
 GLUCOPYRANOSYL)-CYANIDIN 0.5
 LF NAP
 3-O-(2-O-{BETA-D-
 GLUCOPYRANOSYL})-6-O-(4-O-{BETA-
 D-GLUCOPYRANOSYL})-5-O-BETA-D-
 GLUCOPYRANOSYL)-5-O-BETA-D-
 GLUCOPYRANOSYL)-CYANIDIN 0.5
 LF NAP
 3-O-(6-O-{TRANS-SINAPYL})-2-O-(BETA-D-
 GLUCOPYRANOSYL)-BETA-D-
 GLUCOPYRANOSYL)-5-O-
 (BETA-D-GLUCOPYRANOSYL)-
 CYANIDIN 0.1 LF NAP
 GLUCORAPHANIN LF NAP
 GLUTAMIC-ACID 2,700-36,099 LF USA
 GLYCINE 270-3,610 LF USA
 GOITRIN PL AME
 HISTIDINE 250-3,343 LF USA
 2-HYDROXY-3-BUTENYL-
 GLUCOSINOLATE LF AME
 2-HYDROXY-1-CYANO-BUT-3-ENE LF
 NAP
 4-HYDROXYGLUCOBRASSICIN LF NAP
 4-HYDROXY-INDO-3-YL-METHYL-
 GLUCOSINOLATE SD NAP
 4-HYDROXY-INDOYL-3-YL-METHYL-
 GLUCOSINOLATE LF NAP
 INDOLE-3-ACETONITRILE PL AME
 INDOLE-3-CARBINOL PL AME
 INDOLE-3-CARBOXALDEHYDE SH
 NAP
 INDOYL-3,3'-DIMETHANE SH NAP
 3-INDOYL-METHYL-GLUCOSINOLATE
 PL AME
 IRON 4-151 (-2,030) LF PED USA USG
 ISOLEUCINE 610-8,156 LF USA
 ISOMENTHOL PL AME
 JASMONIC-ACID LF NAP
 KAEMPFEROL 100-300 LF NAP
 KAEMPFEROL-3-FERULOYL-
 SOPHOROSIDE LF NAP
 KAEMPFEROL-7-GLUCOSIDE LF NAP
 KAEMPFEROL-3-SINAPOYL-
 SOPHOROSIDE LF NAP
 KAEMPFEROL-3-SOPHOROSIDE LF
 NAP
 KAEMPFEROL-3-SOPHOROSIDE-7-
 GLUCOSIDE LF NAP
 KILOCALORIES 240-3,209 LF USA
 LANTHANUM 6.7-20.3 LF USG
 LEAD 0.002-5.8 LF AAS USG
 LEUCINE 630-8,423 LF USA
 LINOLEIC-ACID 350-4,680 LF USA
 ALPHA-LINOLENIC-ACID 460-6,150 LF
 USA
 LITHIUM 0.28-1.4 LF USG
 LUTEIN LF NAP
 LYSINE 570-7,621 LF USA
 MAGNESIUM 120-2,228 (-20,300) LF AAS
 USA USG
 MALIC-ACID LF NAP

- MANGANESE 1-45 (-580) LF AAS USA
USG 1/
MENTHOL PL AME
MERCURY 0.0003-0.0125 LF AAS USG
METHIONINE 120-1,604 LF USA
4-METHOXYBRASSININ 1 LF NAP
N-(1)-METHOXYBRASSININ 63 LF NAP
METHOXYBRASSITIN 30 LF NAP
1-METHOXYGLUCOBRASSICIN LF NAP
1-METHOXY-3-INDOYL-METHYL PL
AME
2-METHOXY-PHENOL PL AME
METHYL-AMINE 3.4-22.7 LF NAP
N-METHYL-ANILINE 0.3 LF NAP
S-METHYL-CYSTEINE-SULFOXIDE LF
NAP
N-METHYL-PHENETHYLAMINE 0.5-3.7
LF NAP
N-METHYL-BETA-PHENETHYLAMINE
0.5-2 LF NAP
4-METHYL-SULFINYL-BUTYL-
GLUCOSINOLATE LF AME
4-METHYL-SULFINYL-BUTYL-
ISOTHIOCYANATE LF AME
3-METHYL-SULFINYL-PROPYL-
GLUCOSINOLATE LF AME
3-METHYL-SULFINYL-PROPYL-
ISOTHIOCYANATE LF AME
4-METHYL-THIO-BUTYL-
GLUCOSINOLATE LF AME
4-METHYL-THIO-BUTYL-
ISOTHIOCYANATE LF AME
2-METHYL-THIO-PROPYL-
GLUCOSINOLATE LF AME
3-METHYL-THIO-PROPYL-
ISOTHIOCYANATE LF AME
MEVALONIC-ACID LF NAP
MOLYBDENUM <0.1-8.7 LF AAS USG
NARCOTINE LF NAP
NAPOLEIFERIN SD (0.1 UMOL/G
DEFFATED SEED)
NEOCHLOROGENIC-ACID PL AME
NEOGLUCOBRASSICIN PL AME
NEOMENTHOL PL AME
NEOXANTHIN LF NAP
NIACIN 3-40 (-151) LF USA (PED) 4/
NICKEL 0.02-8.7 LF AAS USG
NITROGEN 2,100-37,500 LF AAS
N-NONACOSANE LF NAP
NONACOSAN-15-ONE LF NAP
OLEIC-ACID 130-1,738 LF USA
OXALATE 1,000-13,370 LF USA
OXALIC-ACID 59-350 LF NAP WBB
PALMITIC-ACID 190-2,540 LF USA
PANTOTHENIC-ACID 1.4-19 LF USA
4-PENTENYL-ISOTHIOCYANATE PL
AME
N-PENTYL-AMINE 0.6-1.4 LF NAP
PHENETHYLAMINE 2.1-8.6 LF NAP
PHENETHYL-CYANIDE LF NAP
PHENYLETHYL-ISOTHIOCYANATE LF
USA
PHENYLALANINE 390-5,214 LF USA
2-PHENYL-ETHYL-GLUCOSINOLATE LF
USA
PHEOPHYTIN—A LF NAP
2-PROPENYL-GLUCOSINOLATE PL
AME
PROPYL-GLUCOSINOLATE PL AME
PHOSPHORUS 214-6,500 (-20,300) LF
(PED) AAS NAP USA USG 1/
PHYTOSTEROLS 110-1471 LF USA
POTASSIUM 2,368-42,500 (-95,700) LF
AAS USA USG 1/
PROGOITRIN LF NAP
PROGOITRIN SD (1.9 UMOL/G
DEFATTED SEED)
PROLINE 2,380-31,821 LF USA
PROP-2-ENYL-ISOTHIOCYANATE PL
NAP
PROTEIN 10,780-179,425 (-275,000) LF
(PED) USA 4/
PROTocatechuic-ACID PL WBB
QUERCETIN 2-100 LF NAP
QUERCETIN-3-GLUCOSIDE LF NAP
QUERCETIN-3-SINAPOYL
SOPHOROSIDE LF NAP
QUERCETIN-3-SOPHOROSIDE LF
NAP
QUERCETIN-3-SOPHOROSIDE-7-
GLUCOSIDE LF NAP
QUINIC-ACID LF NAP
RIBOFLAVIN 0-4 (-17) LF (PED) USA 4/
RUBIDIUM 0.4-27.5 LF AAS
SEC-BUTYL-ISOTHIOCYANATE SD
NAP
SELENIUM 0.0028-0.25 LF AAS USG
SERINE 710-9,493 LF USA
SILICON 1-25 LF AAS
SILVER 0.07-0.58 LF USA
SINAPIC-ACID 13-67 LF CRC(FSN)
1-O-SINAPOYL-BETA-D-GLUCOSE LF
NAP
3-O-(6-O-{TRANS-SINAPL})-2-O-(BETA-D-
GLUCOPYRANOSYL)-BETA-D-
GLUCOPYRANOSYL5-O-
(BETA-D-GLUCOPYRANOSYL)-
CYANIDIN 0.1 LF NAP

SINIGRIN SD (44.7 UMOL/G DEFATTED SEED; ABS)
 BETA-SITOSTEROL LF NAP
 SODIUM 163-4,510 (-8,320) LF (PED) USA USG 1/
 SPIROBRASSININ 35 LF NAP
 STEARIC-ACID 10-134 LF USA
 STRONTIUM 3-870 LF USG
 SUCCINIC-ACID LF NAP
 SULFUR 385-8,750 LF AAS USG
 THIAMIN 0.5-10 LF PED USA
 THREO-1-CYANO-2-HYDROXY-3,4-EPITHIOBUTANE PL AME
 THREONINE 420-5,615 LF USA
 TITANIUM 0.35-203 LF USG
 ALPHA-TOCOPHEROL 0.4-7 LF TOT
 TRYPTOPHAN 120-1,604 LF USA
 TYROSINE 210-2,807 LF USA
 VALINE 520-6,952 LF USA
 VANADIUM 0.48-14.5 LF USA
 5-VINYLOXAZOLIDINE-2-THIONE PL AME
 VIOLAXANTHIN LF NAP
 VIT-B6 0.8-14 LF USA
 VIT-U 2-25 LF NAP
 WATER 891,000-950,000 LF USA
 YTTERBIUM 0.19-8.7 LF USA
 YTTRIUM 0.48-29 LF USA
 ZINC 2-36 (-1,740) LF AAS USA USG 1/
 ZIRCONIUM 1.4-203 LF USG 1/

1/ USG=USGS figures. AME= Bruce Ames data on cabbage:49 natural pesticides and metabolites NAP=Napralert figures (AD Little Contract), not clearly referable to another variety. AAS=ACTA AGRIC SCAND SUPPL 22; H2O=92% ZMB=12.5 X APB

BRASSICA OLERACEA L. var. BOTRYTIS L.

"CAULIFLOWER"

ABSCISIC-ACID FL NAP
 ACETONE FL NAP
 ALANINE 1,050-13,565 FL USA
 ALUMINUM 1-150 FL AAS
 AMMONIA(NH3) 6,376 FL NAP
 ALPHA-AMYRIN FL NAP
 BETA-AMYRIN FL NAP
 ANILINE 22 FL NAP
 ARGININE 960-12,400 FL USA
 ARSENIC <0.01 FL AAS

ASCORBIC-ACID 660-9,300 FL PED 1/ USA WOI
 ASH 6,600-121,250 FL AAS PED USA WOI
 BENZYLAMINE 1.4 FL NAP
 BORON 1-76 FL AAS BOB
 BORON 36 LF JPN14:613
 BORON 19 ST JPN14:613
 BROMINE <1 FL AAS
 CADMIUM 0.003-0.25 FL AAS
 CAFFEIC-ACID 9 LF CRC(FSN)
 CALCIUM 210-4,040 FL AAS USA
 CARBOHYDRATES 49,200-635,660 FL PED USA WOI
 BETA-CAROTENE 4 FL PED
 CHROMIUM 0.001-0.125 FL AAS
 CITRIC-ACID FL NAP
 COBALT 0.001-0.125 FL AAS
 COPPER 0.3-8 FL AAS USA
 P-COUMARIC-ACID 35 FL CRC(FSN)
 CYSTINE 230-2,970 FL USA
 DIMETHYL-AMINE 14 FL NAP
 DIMETHYL-DISULFIDE PL NAP
 ETHANOL FL NAP
 FAT 1,800-29,400 FL PED USA WOI
 FERULIC-ACID 2 LF CRC(FSN)
 FIBER 8,000-132,000 FL PED USA
 FLUORINE 0.02-2.5 FL AAS
 FUMARIC-ACID FL NAP
 GLUCOBRASSICIN 60-1,670 FL LWT24:361
 GLUCOERUCIN 0-210 FL LWT24:361
 GLUCOIBERIN 0-1,600 FL LWT24:361
 GLUCONAPOLEIFERIN 0-80 FL LWT24:361
 GLUCONASTURTIN 0 FL LWT24:361
 GLUCORAPHANIN 0-990 FL LWT24:361
 GLUCOSINOLATES 20-1,140 FL LWT24:361
 GLUTAMIC-ACID 2,650-34,240 FL USA
 GLYCINE 640-8,270 FL USA
 HISTIDINE 400-5,165 FL USA
 4-HYDROXY-GLUCOBRASSICIN 7-390 FL LWT24:361
 5-HYDROXY-GLUCOBRASSICIN 20 nM/ G TC NAP
 INDOYL-3-METHYL-GLUCOSINOLATE FL LWT24:361
 IRON 5-122 FL PED USA WOI
 ISOLEUCINE 760-9,820 FL USA
 KAEMPFEROL 30 FL NAP
 KILOCALORIES 240-3,100 PL USA
 LEAD <0.01 FL AAS
 LEUCINE 1,160-15,000 FL USA

LINOLEIC-ACID 190-2,455 FL USA
 LINOLENIC-ACID 640-8,270 FL USA
 LYSINE 1,070-13,825 FL USA
 MAGNESIUM 115-2,250 FL AAS USA
 MALIC-ACID FL NAP
 MANGANESE 1.5-48 FL AAS
 MERCURY 0.0004-0.025 FL AAS
 METHANOL FL NAP
 METHIONINE 280-3,615 FL USA
 4-METHOXY-GLUCOBRASSICIN 15-355 FL LWT24:361
 5-METHOXY-GLUCOBRASSICIN 110 nM/G TC NAP
 4-METHOXY-INDOL-3-YL-METHYL-GLUCOSINOLATE FL NAP
 METHYLAMINE 65 FL NAP
 N-METHYL-PHENETHYLAMINE 1.6 FL NAP
 N-METHYL-BETA-PHENETHYLAMINE 1.6 FL NAP
 4-METHYLSULFINYL-BUTYL-GLUCOSINOLATE FL LWT24:361
 3-METHYLSULFINYL-PROPYL-GLUCOSINOLATE FL LWT24:361
 4-METHYLTHIOBUTYL-GLUCOSINOLATE FL LWT24:361
 3-METHYLTHIOPROPYL-GLUCOSINOLATE FL LWT24:361
 MOLYBDENUM >0.1 FL AAS
 MOLYBDENUM 1.65 LF JPN14:613
 MOLYBDENUM 0.98 ST JPN14:613
 MUFA 120-1,550 FL USA
 NEOGLUCOBRASSICIN 8-450 FL LWT24:361
 NEOGLUCOBRASSICIN 10 nM/G TC NAP
 NIACIN 5-85 FL USA
 NICKEL 0.03-12 FL AAS
 NITROGEN 3,100-47,500 FL AAS
 OLEIC-ACID 120-1,550 FL USA
 OXALIC-ACID 68 PL WBB
 PALMITIC-ACID 240-3,100 FL USA
 PANTOTHENIC-ACID 1.4-18 FL NAP
 N-PENTYL-AMINE 3.3 FL NAP
 PHENETHYLAMINE 1.8 FL NAP
 PHENYLALANINE 710-9,175 FL USA
 PHOSPHORUS 385-7,375 FL AAS PED USA WOI
 PHYTOSTEROLS 180-2,325 FL USA
 POTASSIUM 3,300-49,080 FL USA
 PROGOITRIN 0-60 FL LWT24:361
 PROLINE 860-11,110 FL NAP

PROP-2-ENYL-GLUCOSINOLATE FL LWT24:361
 PROTEIN 18,680-300,000 FL PED USA WOI
 PUFA 830-10,725 FL USA
 QUERCETIN 6 FL NAP
 QUINIC-ACID FL NAP
 RIBOFLAVIN 0.3-11 FL PED USA
 RUBIDIUM 0.43-11 FL AAS
 SEC-BUTYL-ISOTHIOCYANATE SD NAP
 SELENIUM <0.002 FL AAS
 SELENIUM 0.024 LF JPN14:613
 SELENIUM 0.014 ST JPN14:613
 SERINE 1,040-13,440 FL USA
 SFA 270-3,490 FL USA
 SILICON 2-125 FL AAS
 SINAPIC-ACID 20 LF CRC(FSN)
 SINIGRIN 0-325 FL LWT24:361
 SODIUM 120-2,300 FL USA
 STEARIC-ACID 30-390 FL USA
 SUCCINIC-ACID FL NAP
 THIAMIN 0.6-12 FL PED USA
 THREONINE 720-9,300 FL USA
 ALPHA-TOCOPHEROL 0.3-4 FL USA
 TRYPTOPHAN 260-3,360 FL USA
 TYROSINE 430-5,555 FL USA
 VALINE 1,000-12,920 FL NAP
 4-VINYLGUAIAICOL PL CRC(FNS)
 VIT-B6 2-30 FL NAP
 WATER 894,000-926,000 PL PED USA
 ZINC 3-97 FL AAS

FL NAP=NAPRALERT data referable to inflorescence or flower of var. botrytis.
 AAS=ACTA AGRIC SCAND SUPPL 22;
 H2O=92% ZMB=12.5 X APB

BRASSICA OLERACEA L.

"COLLARDS"

ALANINE 670-10,981 LF USA
 ARGININE 800-13,112 LF USA
 ASCORBIC-ACID 233-3,819 LF USA
 ASH 5,500-90,145 LF USA
 ASPARTIC-ACID 1,200-19,668 LF USA
 CALCIUM 1,170-19,180 LF USA
 CARBOHYDRATES 37,600-616,264 LF USA
 BETA-CAROTENE 20-328 LF USA
 COPPER 2-43 LF USA
 CYSTINE 160-2,624 LF USA

FAT 2,200-36,058 LF USA
 FIBER 5,700-93,423 LF USA
 FOLACIN 0.83-2.4 LF USA
 GLUCOBRASSICANAPIN SD (0.9-1.1
 UMOL/G DEFATTED SEED MEAL)
 GLUCONAPIN SD (23-23.6 UMOL/G
 DEFATTED SEED MEAL; ABS)
 GLUTAMIC-ACID 1,310-21,471 LF
 USA
 GLYCINE 600-9,834 LF USA
 HISTIDINE 300-4,917 LF USA
 IRON 6-102 LF USA
 ISOLEUCINE 640-10,490 LF USA
 KILOCALORIES 190-3,112 LF USA
 LEUCINE 970-15,900 LF USA
 LINOLEIC-ACID
 ALPHA-LINOLENIC-ACID
 LYSINE 750-12,293 LF USA
 MAGNESIUM 170-2,786 LF USA
 MANGANESE 4-60 LF USA
 METHIONINE 210-3,442 LF USA
 MYRISTIC-ACID
 NAPOLEIFERIN SD (3.7-4.6 UMOL/G
 DEFATTED SEED MEAL; ABS)
 NIACIN 3.7-61 LF USA
 OLEIC-ACID
 OXALATE 4,500-73,755 LF USA
 PALMITIC-ACID
 PALMITOLEIC-ACID
 PANTOTHENIC-ACID 0.64-10.5 LF
 USA
 PHENYLALANINE 560-9,178 LF USA
 PHOSPHORUS 160-2,622 LF USA
 PHYTOSTEROLS
 POTASSIUM 1,480-24,257 LF USA
 PROGOITRIN SD (81.9-96.8 UMOL/G
 DEFATTED SEED MEAL)
 PROLINE 670-10,981 LF USA
 PROTEIN 15,700-257,323 LF USA
 RIBOFLAVIN 0.6-10.5 LF USA
 SERINE 500-8,195 LF USA
 SINIGRIN SD (4.7-104.6 UMOL/G
 DEFATTED SEED MEAL; ABS)
 SODIUM 280-4,589 LF USA
 STEARIC-ACID
 THIAMIN 0.3-4.75 LF USA
 THREONINE 550-9,014 LF USA
 TRYPTOPHAN 200-3,278 LF USA
 TYROSINE 420-6,884 LF USA
 VALINE 770-12,620 LF USA
 VIT-B6 0.7-11 LF USA
 WATER 932,500-945,500 LF USA
 ZINC 10-157 LF USA

BRASSICA OLERACEA var.
ACEPHALA DC

"KALE"

ACETYL-CHOLINE LF NAP
 ALANINE 1,660-10,680 LF USA
 AMMONIA(NH₃) 15,260 FL NAP
 ANILINE 0.7 LF NAP
 ARACHIDONIC-ACID 20-130 LF USA
 ARGININE 1,840-11,840 LF USA
 ASCORBIC-ACID 1,200-7,720 LF USA
 ASH 15,000-98,500 LF USA
 ASPARTIC-ACID 2,950-18,985 LF USA
 BENZYLAMINE 3.8 LF NAP
 N-BUTYL-AMINE 0.5 LF NAP
 CALCIUM 1,200-7,725 LF USA
 CARBOHYDRATES 100,000-644,000 LF
 USA
 BETA-CAROTENE 50-345 LF USA
 CITRIC-ACID LF NAP
 COPPER 3-20 LF USA
 CYSTINE 440-2,830 LF USA
 DIMETHYL-AMINE 5.5 LF NAP
 FAT 7,000-45,050 LF USA
 1-O-FERULOYL-BETA-D-GLUCOSE LF
 NAP
 FIBER 15,000-96,500 LF USA
 FOLACIN 0.3-2 LF USA
 FUMARIC-ACID LF NAP
 GLUCOBRASSICANAPIN LF NAP
 GLUCOIBERIN LF NAP
 GLUCONAPIN LF NAP
 GLUTAMIC-ACID 3,740-24,065 LF USA
 GLYCINE 1,590-10,232 LF USA
 HISTIDINE 690-4,440 LF USA
 2-HYDROXY-BUT-3-ENYL-
 GLUCOSINOLATE LF NAP
 INDOLE-3-ACETONITRILE SH NAP
 INDOLE-3-CARBOXALDEHYDE SH
 NAP
 INDOLE-3-CARBOXYLIC-ACID SH
 NAP
 3-INDOYL-METHYL-GLUCOSINOLATE
 LF NAP
 IRON 15-110 LF USA
 ISOLEUCINE 1,970-12,675 LF USA
 ISOPENTYL-AMINE 0.5 LF NAP
 KAEMPFEROL 13 LF NAP
 KILOCALORIES 500-3,220 LF USA
 LAURIC-ACID 20-130 LF USA
 LEUCINE 2,310-14,865 LF USA
 LINOLEIC-ACID 1,380-8,880 LF USA

LINOLENIC-ACID 1,800-11,585 LF
 USA
 LYSINE 1,970-12,675 LF USA
 MAGNESIUM 340-2,190 LF USA
 MALIC-ACID LF NAP
 MANGANESE 8-50 LF USA
 METHIONINE 320-2,060 LF USA
 METHYLAMINE 16.6 LF NAP
 N-METHYL-PHENETHYLAMINE 2 LF
 NAP
 MUFA 520-3,345 LF USA
 MYRISTIC-ACID 30-190 LF USA
 NIACIN 10-65 LF USA
 OLEIC-ACID 490-3,155 LF USA
 PALMITIC-ACID 760-4,890 LF USA
 PALMITOLEIC-ACID 10-65 LF USA
 PANTOTHENIC-ACID 1-6 LF USA
 N-PENTYL-AMINE 0.4 LF NAP
 PHENETHYLAMINE 3 LF NAP
 PHOSPHORUS 560-3,600 LF USA
 POTASSIUM 4,270-30,000 LF USA
 PROGOITRIN LF NAP
 PROLINE 1,960-12,610 LF USA
 PROTEIN 33,000-212,350 LF USA
 PUFA 3,380-21,750 LF USA
 QUERCETIN 7-50 LF NAP PAM
 QUINIC-ACID LF NAP
 RIBOFLAVIN 1-8 LF USA
 SERINE 1,390-8,945 LF USA
 SFA 910-5,855 LF USA
 1-O-SINAPOYL-BETA-D-GLUCOSE LF
 NAP
 SINIGRIN SD NAP
 SODIUM 290-3,650 LF USA
 STEARIC-ACID 40-260 LF USA
 SUCCINIC-ACID LF NAP
 THIAMIN 1-7 LF USA
 THREONINE 1,470-9,460 LF USA
 ALPHA-TOCOPHEROL 359-785 LF
 CCG
 ALPHA-TOCOPHEROL 9-16 ST
 CCG
 TOLUIDENE 1.1 LF NAP
 TRYPTOPHAN 400-2,575 LF USA
 TYROSINE 1,170-7,530 LF USA
 VALINE 1,810-11,645 LF USA
 VIT-B6 3-17 LF USA
 WATER 839,000-850,000 LF USA
 ZINC 4-28 LF USA

NAP=NAPRALERT (A.D. Little,1991); all
 entries under acephala; I'm using kale as
 my catchall for that variety.

BRASSICA OLERACEA var.
GONGYLODES L.

“KOHLRABI”

2-ACETYLFURAN 0.02 ST PC29:1183
 2-ACETYL-4-METHYLTHIAZOLE 0.02
 ST PC29:1183
 2-ACETYLPYRIDINE 0.02 ST PC29:1183
 2-ACETYLTHIAZOLE TR ST PC29:1183
 2-ACETYLTHIOPHEN 0.02 ST PC29:1183
 ARGININE 1,050-11,667 ST USA
 ASCORBIC-ACID 620-6,890 ST USA
 ASH 7,000-111,110 ST USA WOI
 BENZALDEHYDE 0.02 ST PC29:1183
 BUTANEDIONE 0.02 ST PC29:1183
 CALCIUM 200-2,665 ST USA WOI
 CARBOHYDRATES 59,000-688,900 ST
 USA WOI
 CARBON-DISULFIDE 0.19 ST PC29:1183
 BETA-CAROTENE 0.24-2.67 ST USA
 CITRIC-ACID ST NAP
 CYCLOHEXANE TR ST PC29:1183
 CYSTINE 70-778 ST USA
 DECA-2-ONE 0.02 ST PC29:1183
 DIBUTYL-PHTHALATE 1.52 ST
 PC29:1183
 DIMETHYL-DISULFIDE 11.21 ST
 PC29:1183
 DI-(2-METHYLPROPYL)-PHTHALATE
 0.10 ST PC29:1183
 2,3-DIMETHYLPYRAZINE 0.04 ST
 PC29:1183
 2,5-DIMETHYLPYRAZINE 0.38 ST
 PC29:1183
 2,6-DIMETHYLPYRAZINE 0.57 ST
 PC29:1183
 DIMETHYL-SULFIDE 0.38 ST PC29:1183
 2,5-DIMETHYLTHIOPHEN-3-
 CARBOXYALDEHYDE 0.02 ST
 PC29:1183
 DIMETHYL-TRISULFIDE 47.50 ST
 PC29:1183
 2,5-DIMETHYL-6-VINYLPYRAZINE 0.19
 ST PC29:118312
 DIOCTYL-PHTHALATE? 3.42 ST
 PC29:1183
 EICOSANE TR ST PC29:1183
 EO 190 ST PC29:1183
 2-ETHYL-FURAN 0.08 ST PC29:1183
 ETHYL-METHYL-DISULFIDE 0.02 ST
 PC29:1183
 FAT 1,000-11,110 ST USA

FIBER 1,000-11,110 ST USA
 FUMARIC-ACID ST NAP
 2-FURALDEHYDE 0.38 ST PC29:1183
 GLUCOBRASSICIN 110 nM/G SP NAP
 GLUCOBRASSICIN 180 nM/G TC NAP
 HENEICOSANE TR ST PC29:1183
 HEPTA-2,4-DIENAL 0.04 ST PC29:1183
 HEPTANONITRILE 0.04 ST PC29:1183
 HEXADECAN-1-OL 0.57 ST PC29:1183
 HEXANAL 0.04 ST PC29:1183
 HEXANE 0.04 ST PC29:1183
 HEXANONITRILE 0.06 ST PC29:1183
 (E)-HEX-2-EN-1-OL 0.08 ST PC29:1183
 (Z)-HEX-3-EN-1-OL 0.19 ST PC29:1183
 HISTIDINE 190-2,111 ST USA
 5-HYDROXY-GLUCOBRASSICIN 100
 nM/G SP NAP TC NAP
 5-HYDROXY-GLUCOBRASSICIN 6 nM/G
 TC NAP TC NAP
 INDOLE 1.33 ST PC29:1183
 3-INDOLYLACETONITRILE 0.57 ST
 PC29:1183
 IRON 4-44 ST USA
 ISOLEUCINE 780-8,667 ST USA
 KAEMPFEROL 80 SH NAP
 KILOCALORIES 270-3,000 ST USA
 LEUCINE 670-7,445 ST USA
 LINALOOL 0.08 ST PC29:1183
 LINALOOL-OXIDE 0.06 ST PC29:1183
 LINOLEIC-ACID 200-2,222 ST USA
 ALPHA-LINOLENIC-ACID 260-2,889 ST
 USA
 LYSINE 560-6,222 ST USA
 MAGNESIUM 190-2,110 ST USA
 MALIC-ACID ST NAP
 METHANETHIOL 0.02 ST PC29:1183
 METHIONINE 130-1,445 ST USA
 5-METHOXY-GLUCOBRASSICIN 50 nM/
 G TC NAP
 5-METHOXY-GLUCOBRASSICIN 370
 nM/G TC NAP
 2-METHOXY-4-VINYLPHENOL 0.17 ST
 PC29:1183
 2-METHYL-BUTANAL 0.76 ST
 PC29:1183
 3-METHYL-BUTANAL 0.02 ST
 PC29:1183
 2-METHYL-BUTAN-1-OL 1.14 ST
 PC29:1183
 3-METHYL-BUTAN-1-OL TR ST
 PC29:1183
 3-METHYLBUTANONITRILE 0.04 ST
 PC29:1183
 2(OR 3)-METHYLINDOLE 0.19 ST
 PC29:1183
 METHYL-OCTANOATE TR ST
 PC29:1183
 METHYL-PROPANOL 0.08 ST PC29:1183
 METHYL-PROPYL-SULFIDE 0.08 ST
 PC29:1183
 METHYL-PYRAZINE 0.08 ST
 PC29:118312
 4-METHYLTHIOBUTAN-2-ONE 0.17 ST
 PC29:1183
 4-(METHYLTHIO)-BUTANONITRILE
 27.60 ST PC29:1183
 4-(METHYLTHIO)-BUTYL-
 ISOTHIOCYANATE 6.08 ST PC29:1183
 1-METHYLTHIOPENTAN-3-ONE 0.10 ST
 PC29:1183
 5-(METHYLTHIO)-PENTANONITRILE
 61.40 ST PC29:1183
 3(OR 5)-METHYLTHIOPHEN-2-
 CARBOXYALDEHYDE 0.38 ST
 PC29:1183
 3-(METHYLTHIO)-PROPYL-
 ISOTHIOCYANATE 3.61 ST PC29:1183
 2-METHYL-6-VINYLPYRAZINE 0.04 ST
 PC29:118312
 MUFA 70-780 ST USA
 MYRISTIC-ACID 0 ST USA
 NEOGLUCOBRASSICIN 320 nM/G SP
 NAP
 NEOGLUCOBRASSICIN 70 nM/G TC
 NAP
 NIACIN 4-44 ST USA
 NONADECANE TR ST PC29:1183
 OCTADECANE TR ST PC29:1183
 OCTAN-1-OL 0.02 ST PC29:1183
 OLEIC-ACID 70-780 ST USA
 PALMITIC-ACID 110-1,220 ST USA
 PALMITOLEIC-ACID 0 ST USA
 PANTOTHENIC-ACID 1.6-18 ST USA
 PENTANE 0.76 ST PC29:1183
 PENTAN-1-OL 0.02 ST PC29:1183
 PENT-1-EN-3-OL 0.04 ST PC29:1183
 2-PENTYLFURAN 0.06 ST PC29:1183
 2-PHENETHYL-ISOTHIOCYANATE 0.57
 ST PC29:1183
 PHENYLACETONITRILE 0.19 ST
 PC29:1183
 PHENYLALANINE 390-4,333 ST USA
 3-PHENYLPROPANONITRILE 7.98 ST
 PC29:1183
 PHOSPHORUS 400-5,110 ST USA WOI
 POTASSIUM 3,500-38,890 ST USA

PROTEIN 11,000-188,900 ST USA WOI
 PUFA 480-4,335 ST USA
 PYRAZINE TR ST PC29:1183
 PYRIDINE 1.52 ST PC29:1183
 QUERCETIN 20 SH NAP
 RIBOFLAVIN 0.2-2.2 ST USA
 SFA 130-1,445 ST YSA
 SODIUM 200-2,222 ST USA
 STEARIC-ACID 10-110 ST USA
 TETRADECAN-1-OL 0.10 ST PC29:1183
 THIAMIN 0.5-5.5 ST USA
 THIOPHEN-2-CARBOXYALDEHYDE
 0.04 ST PC29:1183
 THIOPHEN-3-CARBOXYALDEHYDE
 0.04 ST PC29:1183
 THREONINE 490-5,445 ST USA
 TOLUENE 0.08 ST PC29:1183
 TRICOSANE TR ST PC29:1183
 3,5,5-TRIMETHYLCYCLOHEX-2-ENONE
 0.06 ST PC29:1183
 2,4,5-TRIMETHYLOXAZOLE 0.02 ST
 PC29:1183
 TRIMETHYLPYRAZINE 0.06 ST
 PC29:1183
 2,4,5-TRIMETHYLTHIAZOLE 0.11 ST
 PC29:1183
 TRYPTOPHAN 100-1,110 ST USA
 VALINE 500-5,555 ST USA
 VINYLPIRAZINE TR ST PC29:1183
 VIT-B6 1.5-17 ST USA
 WATER 910,000-921,000 ST USA WOI

***BRASSICA PEKINENSIS* (LOUR.)
RUPR.**

“CHINESE CABBAGE”

ALUMINUM 28-42 LF USG
 ARSENIC 0.038-0.07 LF USG
 ASH 190,000-210,000 LF USG
 BARIUM 13.3-21 LF USG
 BORON 13.3-21 LF USG
 CADMIUM 0.038-0.042 LF USG
 CAFFEIC-ACID 11 LF CRC(FSN)
 CALCIUM 11,780-16,800 LF USG
 CHROMIUM 0.285-0.315 LF USG
 COBALT 0.19-0.21 LF USG
 COPPER 2.85-3.15 LF USG
 P-COUMARIC-ACID 7 LF CRC(FSN)
 FERULIC-ACID 6 LF CRC(FSN)
 IRON 28.5-63 LF USG
 LEAD 3.8-4.2 LF USG
 LITHIUM 0.76-0.84 LF USG
 MAGNESIUM 2,850-3,150 LF USG

MANGANESE 9.5-10.5 LF USG
 MERCURY 0.00019-0.0021 LF USG
 MOLYBDENUM 1.3-1.47 LF USG
 NICKEL 1.9-2.1 LF USG
 PHOSPHORUS 4,560-7,560 LF USG 1/
 POTASSIUM 74,100-81,900 LF USG 1/
 SELENIUM 0.0009-0.0021 LF USG
 SILVER 0.019-0.21 LF USG
 SINAPIC-ACID 6 LF CRC(FSN)
 SODIUM 1,463-1,932 LF USG
 STRONTIUM 190-420 LF USG
 SULFUR 1,216-1,365 SH USG
 TITANIUM 0.95-1.05 LF USG /
 ALPHA-TOCOPHEROL 2-56 LF TOT
 WATER 947,000-954,000 LF USG
 ZINC 66.5-80 LF USG 1/
 ZIRCONIUM 3.8-4.2 LF USG 2/

1/USG=USGA papers. 2/Assumes ash=10%
ZMB

***BRASSICA RAPA* L.**

“SARSON”

CHROMIUM 2.8 SD ABS 5/
 COBALT 0.6 SD ABS 5/
 COPPER 5-6 SD ABS
 IRON 93 SD ABS 5/
 MANGANESE 20 SD ABS 5/
 NICKEL 1-2 SD ABS 5/
 ALPHA-TOCOPHEROL 189 OI TOT
 GAMMA-TOCOPHEROL 486 OI TOT
 ZINC 15 SD ABS 5/

5/Abs.=Pak.J.Sci.Ind.Res.28:234.1985.

BRASSICA RAPA* L. var. *RAPA

“TURNIP”

ALANINE 350-4,305 RT USA
 ALLANTOIN RT HHB
 ALLANTOIC-ACID RT HHB
 ALUMINUM 2-10 RT AAS
 ARGININE 240-2,950 RT USA
 ARSENIC <0.01 RT AAS
 ASCORBIC-ACID 210-2,580 RT USA
 ASPARTIC-ACID 630-7,750 RT USA
 ASH 7,000-86,000 RT AAS USA
 BORON 2-20 RT AAS
 BRASSICASTEROL PL JSG
 BROMINE <1 RT AAS
 CADMIUM 0.01-0.1 RT AAS
 CALCIUM 300-3,690 RT AAS USA
 CAMPESTEROL PL JSG

CARBOHYDRATES 62,300-766,290 RT USA
 BETA-CAROTENE 0 RT USA
 CHROMIUM 0.005-0.05 RT AAS
 COBALT <0.005 RT AAS
 COPPER 0.4-4 RT AAS
 (+)-CYSTEINE RT HHB
 CYSTINE 50-615 RT USA
 FAT 1,000-12,300 RT USA
 FIBER 9,000-110,700 RT USA
 FLUORINE <0.1 RT AAS
 FOLACIN 0.14-2 RT USA
 GLUTAMIC-ACID 1,300-15,990 RT USA
 GLYCINE 250-3,075 RT USA
 HISTIDINE 140-1,720 RT USA
 IRON 2-37 RT AAS USA
 ISOLEUCINE 360-4,425 RT USA
 KILOCALORIES 270-3,321 RT USA
 LEAD 0.02-0.2 RT AAS
 LEUCINE 330-4,060 RT USA
 LINOLEIC-ACID 120-1,475 RT USA
 LINOLENIC-ACID 400-4,920 RT USA
 LYCOPENE RT HHB
 LYSINE 360-4,425 RT USA
 MAGNESIUM 110-2,000 RT AAS USA
 MANGANESE 0.6-7 RT AAS
 MERCURY 0.001-0.01 RT AAS
 METHIONINE 110-1,350 RT USA
 (+)-S-METHYL-L-CYSTEINE-SULFOXIDE
 RT HHB
 MOLYBDENUM 0.1-1 RT AAS
 MUFA 60-740 RT USA
 NIACIN 4-49 RT USA
 NICKEL 0.01-0.1 RT AAS
 NITROGEN 1,800-18,000 RT AAS
 OLEIC-ACID 60-740 RT USA
 PALMITIC-ACID 100-1,230 RT USA
 PALMITOLEIC-ACID 10-120 RT USA
 PANTOTHENIC-ACID 2-25 RT USA
 PHENYLALANINE 170-2,090 RT USA
 PHOSPHORUS 270-5,000 RT AAS USA
 POTASSIUM 1,700-30,000 RT AAS USA
 PROTEIN 9,000-110,700 RT USA
 PUFA 530-6,520 RT USA
 RAPIN RT HHB
 RIBOFLAVIN 0.3-4 RT USA
 RUBIDIUM 1-10 RT AAS
 SELENIUM <0.002 RT AAS
 SERINE 290-3,565 RT USA
 SFA 110-1,350 RT USA
 SILICON 120-1,200 RT AAS
 SODIUM 400-11,600 RT USA
 STEARIC-ACID 10-120 RT USA
 SULFUR 510-5,100 RT AAS

THIAMIN 0.4-5 RT USA
 THREONINE 250-3,075 RT USA
 4ALPHA,7ALPHA,24-TRIMETHYL-
 5ALPHA-CHOLESTA-8,24-DIEN-3BETA-
 OL PL JSG
 TRYPTOPHAN 90-1,100 RT USA
 TYROSINE 130-1,600 RT USA
 VALINE 300-3,690 RT USA
 VIT-B6 1-11 RT USA
 WATER 900,000-921,120 RT AAS USA
 ZINC 2-23 RT AAS USA

AAS=ACTA AGRICUL SCAND SUPPL 22;
 H2O=90%; ZMP = 10 X APB

BROMELIA PINGUIN L.

"WILD PINEAPPLE"

ASCORBIC-ACID 192-3,430 SH JAD JFM
 ASH 10,700-138,000 SH CRC JAD JFM
 CALCIUM 1,070-15,800 SH JAD JFM
 CARBOHYDRATES 57,000-713,000 LF
 CRC
 BETA-CAROTENE 0-1.7 SH CRC JAD
 JFM
 7,8-DIHYDROXY-15-PIMAREN-3-ONE
 PL JSG
 FAT 1,700-40,000 SH JAD JFM
 FIBER 4,000-90,000 SH JAD JFM
 IRON 3-75 SH CRC JAD JFM
 KILOCALORIES 3,130 LF CRC
 NIACIN 4-57 SH JAD JFM
 NITROGEN 1,410-35,800 SH JAD JFM
 PHOSPHORUS 225-5,000 SH JAD JFM
 PROTEIN 9,000-113,000 LF CRC
 PINGUINAIN FR JFM
 RIBOFLAVIN 0.4-9 SH JAD JFM
 THIAMIN 0.2-3.8 SH CRC JAD JFM
 WATER 916,000-925,000 SH JFM

BROUSSONETIA PAPYRIFERA

(L.) VENT

"PAPER MULBERRY"

ARSENIC 0.62 FR CAL
 BROUSSONINS PL JSG
 CALCIUM 26,900 FR CAL
 COPPER 12 FR CAL
 4',7-DIHYDROXYFLAVAN PL JSG
 7-HYDROXY-4'-METHOXYFLAVAN PL
 JSG
 IRON 560 FR CAL
 KAZINOL PL JSG
 MAGNESIUM 4,030 FR CAL

MANGANESE 81 FR CAL
 MERCURY 0.06 FR CAL
 4-O-METHYLDIAVIDIOSIDE PL JSG
 POTASSIUM 7,340 FR CAL
 SAPONINS 5,000 FR CCO
 SODIUM 135 FR CAL
 ZINC 23 FR CAL

BRUNFELSIA UNIFLORUS

(POHL) D. DON.

"MANACA"

AESCULETIN BK CRC
 BRUNFELSENE PL ALK
 HOPEANINE 4 BK CRC
 MANACEINE 800 BK CRC
 MANACINE 800 BK CRC
 MANDRAGORINE PL CRC
 SCOPOLETIN PL CRC
 STARCH 13,000 BK CRC

BRYONIA ALBA L.

"WHITE BRYONY"

AMYLASE RT HHB
 BRYOAMARIDE RT HHB
 BRYODULCOSIDE C49H84O20 RT HHB
 BRYOIOSIDE C36H62O12
 BRYONICINE RT HHB
 BRYONINE RT HHB
 BRYONOL RT HHB
 BRYOPOLYOSE RT HHB PYROGENIC
 BRYORESIN 20,000-68,000 RT HHB
 CATECHIN-TANNIN
 CERYL-ALCOHOL RT HHB
 CHRYSOPHANIC-ACID RT HHB
 CUCURBITACIN-B
 CUCURBITACIN-D
 CUCURBITACIN-E
 CUCURBITACIN-I
 CUCURBITACIN-J
 CUCURBITACIN-K
 CUCURBITACIN-L
 DIHYDROCUCURBITACIN-B RT HHB
 DIHYDROCUCURBITACIN-E PL JSG
 GLUCOSE
 INVERTASE RT HHB
 ISO-23,24-DIHYDROCUCURBITACIN-D
 PL JSG
 KAEMPFEROL-3-O-RUTINOSIDE PO
 RIZK
 LINOLENIC-ACID RT HHB
 OLEIC-ACID RT HHB

PALMITIC-ACID RT HHB
 PEROXIDASE RT HHB
 PHLOBAPHENE RT HHB
 RHAMNOSE RT HHB
 SPINASTEROL RT HHB
 STEARIC-ACID RT HHB
 DELTA-7-STIGMASTEROL
 STIGMASTEROL
 TANNIN RT 411/
 TETRAHYDROCUCURBITACIN-I PL JSG
 TRIHYDROXYOCTADECADIENIC-
 ACIDS RT 411/
 TRIMETHYLAMINE RT HHB
 UREA RT HHB

BUPLEURUM CHINENSE DC.

"CHAI-HU"

ADONITOL RT CCO
 3-O-(ALPHA-L-ARABINOPYRANOSYL-
 BETA-D-GLUCOPYRANOSYL)-
 OLEANOLIC..JSG
 ARSENIC 0.68 RT CAL
 CALCIUM 7,150-32,100 RT CAL
 COPPER 13-16 RT CAL SMO
 IRON 730-1,200 RT CAL SMO
 LINOLEIC-ACID RT CCO
 LINOLENIC-ACID RT CCO
 MAGNESIUM 2,210-3,390 RT CAL SMO
 MANGANESE 52-114 RT CAL SMO
 MERCURY 0.14 RT CAL
 OLEIC-ACID RT CCO
 POTASSIUM 8,430-1,9200 RT CAL SMO
 SAIKOGENIN-E RT CCO
 SAIKOGENIN-F RT CCO
 SAIKOGENIN-G RT CCO
 SAIKOSAPONIN-A RT CCO
 SAIKOSAPONIN-B RT CCO
 SAIKOSAPONIN-C RT CCO
 SAIKOSAPONIN-D RT CCO
 SODIUM 213-428 RT CAL SMO
 ALPHA-SPINASTEROL RT CCO
 DELTA-7-STIGMASTENOL RT CCO
 DELTA-22-STIGMASTENOL RT CCO
 STIGMASTEROL RT CCO
 ZINC 36-37 RT CAL SMO

BURSERIA DELPECHIANA POISS.

"LINALOE; LIGNALOE"

EO 25,000-120,000 WD WOI
 GERANIOL 250-1,200 WD BML

GERANYL-ACETATE 875-3,000 WD
BML
LIMONENE 75-360 WD BML
LINALOOL 7,500-84,000 WD BML WOI
LINALOOL-MONOXIDE WD WOI
LINALOOL-OXIDE-FURANOID 250-1,200
WD WOI
LINALYL-ACETATE 10,200-56,400 WD
BML WOI
METHYL-HEPTENOL 375-1,800 WD WOI
METHYL-HEPTENONE WD HHB
MYRCENE 75-360 WD BML
NEROL WD HHB
NERYL-ACETATE 625-3,000 WD BML
RESIN WD BML
ALPHA-TERPINEOL 2,125-10,200 WD
BML
CIS-2,6,6-TRIMETHYL-2-VINYL-5-
ACETOXYTETRAHYDROPYRAN WD
BML
TRANS-2,6,6-TRIMETHYL-2-VINYL-5-
ACETOXYTHTRAHYDROPYRAN

BURSERIA SIMARUBA SARG.

"GUMBOLIMBO"

RESIN PL JFM

BUXUS SEMPERVIRENS L.

"BOXWOOD"

N-ACETYLCYCLOPROTOBUXINE · LF
HHB
BEBUXINE LF ALK
BEBEERINE PL ALK
N-BENZOYL-O-ACETYL-BUXODIENINE-
E PL JSG
N-BENZOYLBUXODIENINE-E PL JSG
N-BENZOYLCYCLOBUXIDINE LF HHB
N-BENZOYLCYCLOBUXOLIINE LF
HHB
N-BENZOYLCYCLOPROTOBUXOLIINE
LF HHB
N-BENZOYLDIHYDROCYCLOMICRO-
PHYLLINE LF HHB
BUXALINE-C PL JSG
BUXALPHINE LF ALK
BUXALTINE PL JSG
BUXAMINE LF ALK
BUXAMINOL LF ALK
BUXANDRINE LF ALK
BUXANINE LF ALK

BUXARINE LF ALK
BUXATINE PL ALK
BUXAZIDINE-B LF ALK
BUXAZINE PL ALK
BUXDELTINE LF ALK
BUXENE PL JSG
BUXENINE PL ALK
BUXENINE-G LF ALK
BUXENONE LF ALK
BUXEPIDINE LF HHB
BUXERIDINE LK ALK
BUXETINE LF ALK
BUXIDINE LF ALK
BUXIRAMINE PL JSG
BUXOCYCLAMINE-A PL JSG
BUXOMEGINE LF ALK
BUXOZINE-C PL CCO
BUXPIINE PL ALK
BUXPSIINE PL ALK
BUXTAUINE PL ALK
CYCLOBUXAMINE PL JSG
CYCLOBUXINE PL ALK
CYCLOBUXOXINE PL ALK
CYCLOMICROBUXINE PL JSG
CYCLOMICROSINE PL JSG
CYCLOPROTOBUXINE PL ALK
CYCLOPROTOBUXINE-D PL ALK
CYCLOVIROBUXEINE LF HHB
CYCLOVIROBUXINE-D PL ALK
DEOXYCYCLOBUXOXAZINE PL
JSG
DIHYDROCYCLOBUXINE PL ALK
DIMETHYLCYCLOBUXINE PL ALK
DIMETHYLCYCLOVIROBUXINE PL
ALK
FAT 416,000-443,000 SD CRC
ISOCHONDODENDRINE PL ALK
LINOLEIC-ACID SD HHB
LINOLENIC-ACID SD HHB
N-METHYL-BUXENE PL JSG
METHYLCYCLOPROTOBUXINE PL
ALK
NORBUXAMINE LF ALK
OLEIC-ACID SD HHB
PARABUSONIDINE PL ALK
PARABUXINE PL CRC
PROTEIN 2N-BENZOYLCYCLOBUXINE
LF HHB
14,000-218,000 SD CRC
PSEUDOCYCLOBUXINE PL JSG
TANNIN LF HHB
TIGLOYLCYCLOVIROBUXEINE LF
HHB

CAESALPINIA PULCHERRIMA
 (L.) SW.
"BIRD OF PARADISE"

BENZOIC-ACID LF HHB
 BONDUCELLIN ST RAA
 ALPHA-CAESALPIN BK HHB
 X-CAESALPIN PL JSG
 6-BETA-CINNAMOYL-7-BETA-HY-
 DROXY-VOUACAPEN-5-ALPHA-OL
 RT RAA
 8,9,11,14-DIDEHYDROVOUACAPEN-5-
 ALPHA-OL RT RAA
 2,6-DIMETHOXYBENZOQUINONE PL
 RAA
 ELLAGIC-ACID BK RAA
 ELLAGITANNIN PL RAA
 GALACTOMANNAN 344,000 SD RAA
 GALACTOMANNOSE SD HHB
 GALLIC-ACID LF HHB
 HCN LF HHB
 LEUCODELPHINIDIN PL RAA
 LUPEOL FL RAA
 LUPEOL-ACETATE FL RAA
 8-METHOXYBONDUCELLIN ST RAA
 6-METHOXYPULCHERRIMIN ST RAA
 4'-METHYLISOLQUIRITIGENIN PL RAA
 MUCILAGE SD HHB
 MYRICETIN FL RAA
 MYRICETOL LF RAA
 MYRICITRIN PL HHB
 MYRICITRIN-3-RHAMNOSIDE LF RAA
 PULCHERRALPIN BK RAA
 PULCHERRIMIN ST RAA
 QUERCETIN FL RAA
 RUTIN FL RAA
 BETA-SITOSTEROL FL RAA
 TANNIN 7,000 LF HHB
 TANNIN 3,000 WD HHB
 VOUACAPEN-5-ALPHA-OL RT RAA

CAJANUS CAJAN (L.) HUTH
"PIGEONPEA"

ALANINE 8,170-10,870 SD USA EFN26:71
 ARGININE 11,280-14,530 SD USA EFN26:71
 ASCORBIC-ACID 320-1,601 FR CRC
 ASCORBIC-ACID 0-1,279 SD CRC USA
 ASH 13,000-51,000 FR CRC
 ASH 185,000 LF CRC
 ASH 58,000 PL CRC
 ASH 14,000-46,000 SD CRC USA WOI

ASPARTIC-ACID 17,940-24,000 SD USA
 EFN26:71
 CAJANIN SD WOI
 CAJANONE PL JSG
 CALCIUM 350-2,022 FR CRC
 CALCIUM 8,900 PL CRC
 CALCIUM 290-1,540 SD CRC USA
 CARBOHYDRATES 217,000-747,000 FR
 CRC
 CARBOHYDRATES 636,000 LF CRC
 CARBOHYDRATES 668,000 PL CRC
 CARBOHYDRATES 213,000-714,000 SD
 CRC USA WOI
 BETA-CAROTENE 0.4-4 FR CRC
 BETA-CAROTENE 0.84-4.6 SD CRC USA
 CONCAJANIN SD WOI
 COPPER 10-12 SD USA
 CYSTINE 1,880-2,800 SD USA EFN26:71
 FAT 6,000-20,000 FR CRC
 FAT 69,000 LF CRC
 FAT 60,000 PL CRC
 FAT 6,000-55,354 SD CRC USA WOI
 FERREIRIN PL JSG
 FIBER 35,00-352,000 FR CRC
 FIBER 183,000 LF CRC
 FIBER 308,000 PL CRC
 FIBER 21,380-108,000 SD USA
 GLUTAMIC-ACID 40,790-56,270 SD USA
 EFN26:71
 GLYCINE 6,860-8,970 SD USA EFN26:71
 HISTIDINE 7,090-8,655 SD USA EFN26:71
 IRON 17-56 FR CRC
 IRON 13-62 SD CRC USA
 ISOLEUCINE 6,990-8,780 SD USA EFN26:71
 KILOCALORIES 1,140-3,860 FR CRC
 KILOCALORIES 1,170-3,974 SD CRC USA
 LEUCINE 13,110-17,325 SD USA EFN26:71
 LINOLEIC-ACID 7,780-24,472 SD USA
 LINOLENIC-ACID 350-1,114 SD USA
 LYSINE 13,750-17,010 SD USA EFN26:71
 MANGANESE 17-21 SD USA
 METHIONINE 1,860-2,720 SD USA
 EFN26:71
 MUFA 120-135 SD USA
 NIACIN 18-75 FR CRC
 NIACIN 22-77 SD CRC USA
 OLEIC-ACID 120-381 SD USA
 PALMITIC-ACID 3,070-9,642 SD USA
 PANTOTHENIC-ACID 6.8-20 SD USA
 PHENYLALANINE 16,020-20,780 SD USA
 EFN26:71
 PHOSPHORUS 1,240-4,888 FR CRC
 PHOSPHORUS 2,400 PL CRC
 PHOSPHORUS 1,270-4,500 SD WOI USA

POTASSIUM 6,220-17,472 FR CRC
 POTASSIUM 5,250-18,103 SD WOI USA
 PROLINE 9,550-11,830 SD USA EFN26:71
 PROTEIN 70,000-244,000 FR CRC
 PROTEIN 110,000 LF CRC
 PROTEIN 214,000 PL CRC
 PROTEIN 72,000-262,972 SD USA WOI
 PUFA 8,140-9,100 SD USA
 RIBOFLAVIN 1.6-6.9 FR CRC
 RIBOFLAVIN 1.7-8.0 SD WOI USA
 SERINE 9,780-11,500 SD USA EFN26:71
 SFA 3,300-3,690 SD USA
 SODIUM 156-205 SD USA
 STEARIC-ACID 240-733 SD USA
 THIAMIN 3.4-12.4 FR CRC
 THIAMIN 4-13 SD CRC USA
 THREONINE 7,190-8,580 SD USA EFN26:71
 TRYPTOPHAN 1,580-2,370 SD USA
 EFN26:71
 TYROSINE 4,510-6,015 SD USA EFN26:71
 VALINE 9,130-10,480 SD USA EFN26:71
 VIT-B6 3-4 SD USA
 WATER 644,000-694,000 FR CRC
 WATER 99,000-695,000 SD CRC USA WOI
 ZINC 25-34 SD USA

A value suggesting 91,400-107,783 for
 calcium (WOI) was not entered.

CALADIUM BICOLOR (AIT.)

VENTEN

“HEART OF JESUS”

CALCIUM-OXALATE PL CRC
 STARCH TU HHB

CALEA ZACATECHICHI

SCHLECHT.

“BITTER GRASS”

“DOG’S GRASS”

“MEXICAN CALEA”

1-ALPHA-ACETOXYZACATECHINOLIDE
 PL JSG
 ACETYLENES PL CRC
 CALEINS PL JSG
 CALEOCHROMENE-A PL JSG
 CALEOCHROMENE-B PL JSG
 CARBONIC-ACID PL JFM
 CHLORHYDRIC-ACID PL JFM
 GERMACROLIDES PL CRC
 1-ALPHA-HYDROXYACETOXYZACATE-
 CHINOLIDE-ACETATE PL JSG

1-ALPHA-
 HYDROXYZACATECHINOLIDE-
 METHYL-ETHER PL JSG
 1-OXOZACATECHINOLIDE PL JSG
 PHOSPHORIC-ACID PL JFM
 POLYACETYLENES PL CRC
 SALICYLIC-ACID PL JFM
 SUCCINIC-ACID PL JFM
 SULFURIC-ACID PL JFM

CALENDULA OFFICINALIS L.

“CALENDULA; POT-MARIGOLD”

ALKALOIDS 190,000
 ALPHA-AMYRIN FL HHB
 BETA-AMYRIN FL HHB
 ARNADIOL FL HHB
 ASCORBIC-ACID 1,330-3,100 FL HHB
 AUROCHROME FL RAA
 AUROXANTHIN FL RAA
 BREIN FL RAA
 CAFFEIC-ACID PL JLS58:163
 CALCIUM 30,400 LF MPI
 CALENDINE 100 FL HHB
 CALENDOL PL RAA
 CALENDULADIOL FL 411/
 CALENDULOSIDES RT 411/
 CALENDRIIN PL JSG
 CAMPESTANOL SH RAA
 CAMPESTEROL FL HHB
 ZETA-CAROTENE FL HHB
 CAROTENOIDS 30,000 FL HHB
 CARYOPHYLLENE FL RAA
 CERYL-ALCOHOL FL HHB
 CHLOROGENIC-ACID FL RAA
 CHOLESTANOL SP RAA
 CHOLEST-7-EN-3-BETA-OL SP RAA
 CHOLESTEROL FL HHB
 CHRYSANTHEMAXANTHIN FL HHB
 CITROXANTHIN
 P-COUMARIC-ACID PL JLS58:163
 DIMORPHECOLIC-ACID SD RAA
 EO 200-4,000 FL HHB WICHTL
 ERYTHRODIOL FL 411/
 FARADIOL FL HHB
 FAT 260,000-450,000 SD ABS CRC
 FLAVOCHROME FL HHB
 FLAVONOIDS 3,300-8,000 FL WICHTL
 FLAVOCHROME PL JSG
 FLAVOXANTHIN FL HHB
 CIS-FLAVOXANTHIN FL HHB
 FUCOSTANOL PL JSG
 GALACTOSE FL HHB
 GENTISIC-ACID FL RAA

- HELIANTRIOL-C FL 411/
 HELIANTRIOL-F FL 411/
 P-HYDROXYBENZOIC-ACID FL RAA
 9-HYDROXY-TRANS-10,CIS-12-
 OCTADECADIENIC-ACID SD RAA
 P-HYDROXYPHENYLACETIC-ACID FL
 RAA
 INULIN RT WOJ
 28-ISOFUCOSTEROL FL HHB
 ISORHAMNETIN-3-GLUCOSIDE FL RAA
 ISORHAMNETIN-3-RUTINOSIDE FL
 HHB
 ISORHAMNETIN-3-O-RUTINOSIDE FL
 ABS
 KAEMPFEROL PL JLS58:163
 LAPENETRIOL FL RAA
 LAURIC-ACID 10,000-17,500
 LINOLEIC-ACID 100,000-177-500 SD
 ABS
 LINOLENIC-ACID 18,600-32,200 SD ABS
 LONGISPINOGENINE FL 411/
 LUP-20(29)-ENE-3BETA,16BETA,28-
 TRIOL FL ABS
 LUPEOL FL HHB
 LUTEIN FL RAA
 9-CIS-LUTEIN FL RAA
 9'-CIS-LUTEIN FL RAA
 LUTEIN-EPOXIDE FL RAA
 LUTEOXANTHIN FL RAA
 CIS-LUTEOXANTHIN FL RAA
 LYCOPENE FL HHB
 MALIC-ACID 6,400 FL HHB
 MANILADIOL FL RAA
 24-METHYLCHOLEST-5,22-DIEN-3-
 BETA-OL SP RAA
 24-METHYLCHOLEST-7-EN-7-BETA-OL
 SP RAA
 24-METHYLENE-CHOLESTEROL FL
 HHB
 4-ALPHA-METHYL-24-METHYLENE-
 CHOLEST-7EN-3BETA-OL PL JSG
 4-BETA-METHYLERGOSTA-7,24(28)-
 DIEN-3-BETA-OL FL HHB
 METHYLPENTOSE FL HHB
 4-ALPHA-METHYLSTIGMASTA-7,24(28)-
 DIEN-3BETA-OL
 4-BETA-METHYLSTIGMASTA-7,24(28)-
 DIEN-3BETA-OL
 7-METHYLTocol PL ABS
 8-METHYLTocol PL ABS
 MUCILAGE 15,000 FL HHB
 MUTATOCHROME PL JSG
 MUTAXANTHIN FL RAA
 MYRISTIC-ACID 10,300-16,100 SD ABS
 NARCISSIN FL 411
 NEOLYCOPENE FL HHB
 TRANS-8,TRANS-10,CIS-12-
 OCTADECATRIENIC-ACID SD RAA
 OLEAN-12-ENE-3BETA,16BETA,28-
 TRIOL FL ABS
 OLEANOLIC-ACID FL HHB
 OLEIC-ACID 42,300-73,000 SD ABS
 PALMITIC-ACID 38,900-67,000 SD
 ABS
 PALMITOLEIC-ACID 12,000-20,500 SD
 ABS
 PENTADECANOIC-ACID FL HHB
 PHYTOFLUENE FL RAA
 5-PHYTYLTOLUQUINONE PL ABS
 6-PHYTYLTOLUQUINONE PL ABS
 PLASTOQUINONE PL ABS
 PROTEIN 6,400 FL HHB
 PSEUDOTARAXASTEROL FL HHB
 PYROGALLOL-TANNIN FL RAA
 QUERCETIN PL JLS58:163
 RESIN 34,000 FL HHB
 RUBIXANTHIN PL HHB
 RUTIN FL 411/
 SALICYLIC-ACID 0.34 PL WOJ
 SAPONIN FL HHB
 SAPONOSIDES ABS
 BETA-SITOSTEROL FL HHB
 STIGMASTANOL SP RAA
 STIGMAST-7-EN-3-BETA-OL SP RAA
 STIGMASTEROL FL HHB
 SYRINGIC-ACID FL RAA
 TANNIN 64,500 LF MPI
 TARAX-20-ENE-
 3BETA,16BETA,22ALPHA-TRIOL FL
 ABS
 TARAX-20-ENE-3BETA,16BETA,30-
 TRIOL FL ABS
 TARAXASTEROL FL HHB
 PSI-TARAXASTEROL FL HHB
 ALPHA-TOCOPHEROL LF RAA
 ALPHA-TOCOPHEROL LF RAA
 GAMMA-TOCOPHEROL LF RAA
 ALPHA-TOCOPHEROLQUINONE PL
 ABS
 UBIQUINONE RT ABS
 URONIC-ACID FL HHB
 URSADIOL PL JSG
 URSATRIOL FL RAA
 URSA-12-ENE-3BETA,16BETA,21-TRIOL
 PL ABS(PC24:3066.1985.
 12-URSENE-3,6,21-TRIOL PL JSG
 VANILLIC-ACID FL RAA
 VIOLAXANTHIN FFL HHB

CALOTROPIS SPP
"GIANT MILKWEED"

3-O-ACETYL-CALOTROPIN PL MPI
 ALPHA-AMYRIN BK HHB
 ALPHA-AMYRIN-BENZOATE PL JSG
 BETA-AMYRIN BK HHB
 BETA-AMYRIN-BENZOATE PL JSG
 ARABINOSE LF HHB
 ASCLEPIN BK HHB
 ASH 65,500 SD CRC
 BENZOYLISOLINEOLONE RT HHB
 BENZOYLLINEOLONE RT HHB
 CALACTIN LX HHB
 CALOTOXIN LX HHB
 CALOTROPAGENIN LF CRC
 ALPHA-CALOTROPEOL PL HHB
 BETA-CALOTROPEOL PL HHB
 CALOTROPIN LX HHB
 CALOTROPINE 94 SD CRC
 CAOUTCHOUC 8,000-25,000 LX CRC
 COROGLAUCOGENIN 4,370 SD CRC
 COROTOXIGENIN 66 SD CRC
 FAT 268,000-366,000 SD CRC
 FRUGOSIDE 224-2,310 SD CRC
 GIGANTEOL PL JSG
 GIGANTIN PL HHB
 D-GLUCOSAMINE LF HHB
 GLUCOSE LF HHB
 HISTAMINE LX HHB
 ISOGIGANTEOL PL JSG
 ISOLACTUCEROL LX CRC
 ISOLINEOLONE RT HHB
 ALPHA-LACTUCEROL LX CRC
 ALPHA-LACTUCERYL-ACETATE LX
 CRC
 ALPHA-LACTUCERYL-ISOVALERATE
 LX CRC
 LAURANE SD CRC
 LINEOLONE RT HHB
 LINOLEIC-ACID 86,000-117,000 SD CRC
 WOI
 LINOLENIC-ACID 2,400-3,300 SD CRC
 WOI
 MELISSYL-ALCOHOL SD HHB
 MUDARINE LF MPI
 OLEIC-ACID 139,000-190,000 SD CRC
 WOI
 PALMITIC-ACID 39,900-54,900 SD CRC
 WOI
 PROCEROSIDE LX HHB
 PROTEIN 270,000-301,000 SD CRC
 PSEUDOCALOTROPAGENIN PL CRC

RHAMNOSE LF HHB
 BETA-SITOSTEROL BK HHB
 STIGMASTEROL SD CRC
 SYRIOGENIN LX HHB
 TARAXASTEROL BK HHB
 TARAXASTEROL-BENZOATE PL JSG
 TRYPSIN LX HHB
 USCHARIDIN LX HHB
 USCHARIN LX HHB
 UZARIGENIN LX HHB
 VORUSCHARIN LX HHB
 WATER 74,000 SD CRC

CAMELLIA SINENSIS (L.)
KUNTZE**"TEA"**

ACETIC-ACID
 ACETONE LF NAP
 ACETOPHENONE
 2-ACETYL-FURAN LF NAP
 2-ACETYL-PYRIDINE LF NAP
 2-ACETYL-PYRROLE
 ADENINE LF AYL
 ALANINE
 ALLANTOIC-ACID PL NAP
 ALLANTOIN PL NAP
 ALUMINUM 690 LF
 ALPHA-AMINOBTYRIC-ACID
 2-AMINO-5-(N-ETHYL-CARBOXAMIDO)-
 PENTANOIC-ACID 120 LF NAP
 AMMONIA(NH₃) 400 LF NAP
 ALPHA-AMYRIN TR OI (SD) NAP
 BETA-AMYRIN 76 OI (SD) NAP
 ANGELIC-ACID
 ANILINE LF NAP
 APIGENIN LF NAP
 2-O-BETA-1-ARABINOPYRANOSIDE-
 MYOINOSITOL 4,000 LF NAP
 2-O-(BETA-1-ARABINOPYRANOSYL)-
 MYOINOSITOL 4,000 LF NAP
 ARGININE
 ASCORBIC-ACID LF
 8-C-ASCORBYL-EPIGALLOCATECHIN-3-
 O-GALLATE 11 LF NAP
 ASPARAGIC-ACID
 ASPARAGINE
 ASSAMICAIN-A 58 LF NAP
 ASSAMICAIN-B 77 LF NAP
 ASSAMICAIN-C 34 LF NAP
 ASTRAGALIN LF NAP
 AVENASTEROL SD CCO
 BARRIGENOL-R1 LF

- BARRINGTOGENOL-C LF
 BENZALDEHYDE 2,100-2,300 SH NAP
 BENZOIC-ACID LF
 BENZOAXAZOLE LF NAP
 BENZYL-ACETATE LF
 BENZYL-ALCOHOL 1-160 LF NAP
 BENZYL-ALCOHOL 900-1,400 SH NAP
 BENZYL-BUTYRATE LF NAP
 BENZYL-ETHYL-KETONE LF NAP
 BRASSICASTEROL SD NAP
 BRASSINOLIDE 0.0000046 LF NAP
 BRASSINONE 0.000002 LF NAP
 BUTYRALDEHYDE LF
 3-N-BUTYL-PYRIDINE LF NAP
 4-N-BUTYL-QUINOLINE LF NAP
 BUTYRIC-ACID
 BUTYROSPERMOL SD NAP
 CAFFEIC-ACID PL JLS58:142
 CAFFEINE 3,810-93,000 LF AYL NAP
 CAFFEINE 38,100-47,900 SH NAP
 CALCIUM 327-2,456 LF CRC WOI
 CAMELLIAGENIN-A LF
 CAMELLIAGENIN-D PL JSG
 CAMELLIANIN-A LF NAP
 CAMELLIANIN-B LF NAP
 CAMPESTEROL SD NAP
 CAPROALDEHYDE LF
 CAPROIC-ACID LF
 CAPRYLLIC-ACID
 CARBOHYDRATES 536,000-590,000 LF
 CRC
 BETA-CAROTENE 27-84 LF CRC
 CARVACROL LF CRC(FNS)
 CASTASTERONE 0.1 LF NAP
 (+)-CATECHIN 85-12,700 LF NAP
 D,L-CATECHIN 2,664 LF
 CATECHIN-(4-ALPHA-8)-
 EPIGALLOCATECHIN 12-45 LF NAP
 CATECHIN-(4-ALPHA-8)-
 EPIGALLOCATECHIN-3-GALLATE LF
 NAP
 CHLOROGENIC-ACID LF NAP
 CHONDRILLASTEROL SD NAP
 CINNAMIC-ACID LF
 CITRAL-ALPHA LF
 CITRONELLOL LF
 COPPER 20 LF
 N-P-COUMAROYL-GLUTAMIC-ACID LF
 NAP
 P-COUMARYLQUININC-ACID
 M-CRESOL LF CRC(FNS)
 O-CRESOL LF CRC(FNS)
 P-CRESOL LF CRC(FNS)
 CRYPTOXANTHIN LF
 BETA-CYCLOCITRAL 800-1,000 SH NAP
 CYSTEINE LF
 CYSTINE LF
 BETA-DAMASCENONE LF NAP
 ALPHA-DAMASCONE LF NAP
 BETA-DAMASCONE LF NAP
 DAMMARADIENOL 30 OI (SD) NAP
 DECA-TRANS-2-CIS-4-DIENE-1-AL LF
 NAP
 DECA-TRANS-2-EN-1-AL LF NAP
 DEGALLOYL-THEASINENSIN-F 1-2 LF
 NAP
 5-DEHYDROSHIKIMIC-ACID-REDUC-
 TASE
 DEHYDROVOMIFOLIOL LF NAP
 DEXTRIN LF
 1,3-DIACETYL-BENZENE LF NAP
 1,4-DIACETYL-BENZENE LF NAP
 6,8-DI-C-BETA-D-
 ARABINOPYRANOSYL-APIGENIN 20
 LF NAP
 M-DIGALLIC-ACID LF
 DIHYDROACTINIDIOLIDE LF NAP
 1',2'-DIHYDRO-1',2'-EPOXY-BETA-
 IONONE LF NAP
 ALPHA-DIHYDROERGOSTEROL LF
 DIHYDROKAEMPFEROL SH NAP
 1',2'-DIHYDROXY-1',2'-THREO-BETA-
 IONONE LF NAP
 22,23-DIHYDROSPINASTEROL SD CCO
 22,23-DIHYDROSPINASTERONE SD
 CCO
 3,4-DIMETHOXY-ACETOPHENONE LF
 NAP
 2,4-DIMETHYL-ACETOPHENONE LF
 NAP
 N,N-DIMETHYL-BENZYLAMINE LF
 NAP
 3,5-DIMETHYL-2-ETHYL-PYRAZINE LF
 NAP
 3,6-DIMETHYL-2-ETHYL-PYRAZINE LF
 NAP
 2,5-DIMETHYL-4-ETHYL-THIAZOLE LF
 NAP
 3-(S)-7-DIMETHYL-OCTA-1,5-DIEN-3,7-
 DIOL LF NAP
 3-(S)-7-DIMETHYL-OCTA-1,5,7-TRIEN-3-
 OL LF NAP
 2,4-DIMETHYL-PROPIOPHENONE LF
 NAP
 2,3-DIMETHYL-PYRAZINE LF NAP
 2,5-DIMETHYL-PYRAZINE LF NAP
 2,6-DIMETHYL-PYRAZINE LF NAP
 2,5-DIMETHYL-PYRIDINE LF NAP

2,6-DIMETHYL-PYRIDINE LF NAP
 2,4-DIMETHYL-QUINOLINE LF NAP
 2,6-DIMETHYL-QUINOLINE LF NAP
 4,8-DIMETHYL-QUINOLINE LF NAP
 DIMETHYL-SULFIDE LF
 2,4-DIMETHYL-THIAZOLE LF NAP
 2,5-DIMETHYL-THIAZOLE LF NAP
 6,10-DIMETHYL-UNDECAN-2-ONE LF
 NAP
 DIMETHYLXANTHINE LF AYL
 DIPHENYLAMINE 130-11,700 LF NAP
 N-1-DOTRIACONTANOL LF CCO
 EO 30-10,000 LF HHB WOI NAP
 (-)-EPIAFZELECHIN 6 LF NAP
 EPIAFZELECHIN-3-O-GALLATE 10-11
 LF NAP
 (-)-EPIAFZELECHIN-3-O-GALLATE 37
 LF NAP
 EPIAFZELECHIN-3-O-GALLATE-(4-
 BETA-6)-EPIGALLOCATECHIN-3-O-
 GALLATE 5-6 LF NAP
 EPICATECHIN 149-21,250 LF AYL NAP
 WOI
 EPICATECHIN-3,5-DI-O-GALLATE 4 LF
 NAP
 EPICATECHIN-EPIGALLOCATECHIN-(4-
 BETA-8)-3-O-GALLOYL 50 LF NAP
 EPICATECHIN-GALLATE 5,417-31,000
 LF NAP
 (-)-EPICATECHIN-GALLATE 12,400-
 16,600 LF NAP
 EPICATECHIN-3-O-GALLATE 20 LF
 NAP
 (-)-EPICATECHIN-3-O-GALLATE 3,077-
 3,188 LF NAP
 EPICATECHIN-3-O-GALLATE-(4-BETA-
 6)EPIGALLOCATECHIN-3-O-GALLATE
 6 LF NAP
 EPICATECHIN-3-O-GALLATE-(4-BETA-
 8)EPIGALLOCATECHIN-3-O-GALLATE
 4 LF NAP
 EPICATECHIN-3-O-P-HYDROXY-
 BENZOATE 4 LF NAP
 EPICATECHIN-3-O(3-O-METHYL)-
 GALLATE 71 LF NAP
 (-)-EPICATECHIN-3-O(3-O-METHYL)-
 GALLATE 962 LF NAP
 EPICATECHIN-(4-BETA-
 8)EPIGALLOCATECHIN-3-O-GALLATE
 21 LF NAP
 EPICATECHIN-3-(3-O-
 METHYL)GALLATE) 47 LF NAP
 EPICATECHIN-3-O-(4-O-METHYL)-
 GALLATE 16 LF NAP
 1-EPICATECHIN-GALLATE 16,650 LF
 AYL WOI
 EPICATECHOL SH NAP
 EPICATECHOL-GALLATE SH NAP
 (-)-EPIGALLOCATECHIN 862-31,000 LF
 NAP
 EPIGALLOCATECHIN-3-O-P-
 CAFFEOATE 2 LF NAP
 (-)-EPIGALLOCATECHIN-3-O-
 CINNAMATE 13 LF NAP
 EPIGALLOCATECHIN-3-O-P-
 COUMARATE 83 LF NAP
 (-)-EPIGALLOCATECHIN-3-O-P-
 COUMARATE 38 LF NAP
 EPIGALLOCATECHIN-(4-BETA-8)-
 EPICATECHIN-3-O-GALLATE 28 LF
 NAP
 EPIGALLOCATECHIN-3,3'-DI-O-
 GALLATE 3 LF NAP
 (-)-EPIGALLOCATECHIN-3,3'-DI-O-
 GALLATE 9 LF NAP
 EPIGALLOCATECHIN-3,5-DI-O-
 GALLATE 10 LF NAP
 EPIGALLOCATECHIN-3,4'-DI-O-
 GALLATE 3 LF NAP
 (-)-EPIGALLOCATECHIN-3,4'-DI-O-
 GALLATE 9 LF NAP
 (-)-EPIGALLOCATECHIN-GALLATE
 48,700-54,300 LF NAP
 EPIGALLOCATECHIN-3-O-GALLATE
 224 LF NAP
 (-)-EPIGALLOCATECHIN-3-O-GALLATE
 7,140-8,718 LF NAP
 EPIGALLOCATECHIN-3-O-GALLATE-(4-
 BETA-6)-EPICATECHIN-3-O-GALLATE
 4 LF NAP
 EPIGALLOCATECHIN-3-O-GALLATE-(4-
 BETA-8)-EPICATECHIN-3-O-GALLATE
 44 LF NAP
 EPIGALLOCATECHIN-3-(3-O-METHYL-
 GALLATE) 197 LF NAP
 EPIGALLOCATECHOL-GALLATE SH
 NAP
 EPITHEAFLAGALLIN 6-74 LF NAP
 EPITHEAFLAGALLIN-3-O-GALLATE 17-
 46 LF NAP
 EPITHEAFLAVIC-ACID LF NAP
 EPITHEAFLAVIC-ACID-GALLATE LF
 NAP
 6,7-EPOXY-DIHYDROTHEASPIRANE LF
 NAP
 ERUCIC-ACID SD NAP
 ETHER LF
 N-ETHYL-ACETAMIDE LF NAP

- ETHYL-ACETATE LF NAP
 P-ETHYL-ACETOPHENONE LF NAP
 N-ETHYL-ANILINE LF NAP
 24-ETHYL-BRASSINONE LF NAP
 24(S)-ETHYL-BRASSINONE 0.0000005
 LF NAP
 4-ETHYL-7,11-DIMETHYL-DODECA-
 TRANS-2-TRANS-6,10-TRIENE-1-AL LF
 NAP
 2-ETHYL-HEXAN-1-OL LF NAP
 4-ETHYL-GUAIACOL LF CRC(FNS)
 ETHYL-OCTANOATE LF NAP
 ETHYL-PHENYLACETATE LF NAP
 N-ETHYL-PROPIONAMIDE LF NAP
 P-ETHYL-PROPIOPHENONE LF NAP
 2-ETHYL-PYRIDINE LF NAP
 ETHYL-PYRAZINE LF NAP
 EUGENOL FR NAP
 EUPHOL SD NAP
 TRANS,TRANS-ALPHA-FARNESENE LF
 NAP
 FARNESOL LF NAP
 FAT 20,000-165,000 LF AYL CRC
 FIBER 87,000-270,000 LF AYL CRC
 FURFURYL-ALCOHOL LF AYL
 GADOLEIC-ACID SD NAP
 GALEGINE LF WOI
 GALLIC-ACID LF NAP
 DL-GALLOLATECHIN 12,876 LF WOI
 L-GALLOLATECHIN 25,974 LF WOI
 GALLOLATECHIN-(4-ALPHA-8)-
 EPICATECHIN 8-37 LF NAP
 L-GALLOLATECHIN-GALLATE 79,920
 LF WOI
 (-)-GALLOLATECHIN-GALLATE 1,880
 LF NAP
 GALLOLATECHOL LF NAP
 1-O-GALLOYL-4,6-(S)-HEXAHYDROXY-
 DIPHENOYL-BETA-D-GLUCOSE 16 LF
 NAP
 1-ALPHA-O-GALLOYL-4,6-(S)-
 HEXAHYDROXY-DIPHENOYL-BETA-
 D-GLUCOSE 30 LF NAP
 GERANIAL LF
 TRANS-GERANIC-ACID LF NAP
 GERANIOL 2-2,546 LF NAP
 GERANIOL 800-1,200 SH LF NAP
 GERANIOL-BETA-D-
 GLUCOPYRANOSIDE SH NAP
 GERMANICOL 25 OI (SD) NAP
 BETA-GLUCOGALLIN 28 LF NAP
 GLUCOTHEASAPONIN SD NAP
 GLUTAMINE LF
 GLYCINE LF
- GUAIACOL LF CRC(FNS)
 GUM LF
 HEPTANAL LF
 HEPTAN-1-AL 200-300 LF NAP
 HEPTAN-2-ONE SH NAP
 HEPTA-2-TRANS-EN-1-AL LF NAP
 HEPTA-TRANS-2-TRANSDIEN-4-1-AL
 600-1,000 SH NAP
 N-HEXADECANE LF NAP
 HEXAN-1-AL 5,500-10,300 SH NAP
 N-HEXANOL LF
 ALPHA-BETA-HEXENAL LF
 HEX-TRANS-2-CIS-4-DIEN-1-AL LF NAP
 HEX-CIS-3-EN-1-AL 370 LF NAP
 HEX-TRANS-2-EN-1-AL 1-2,548 LF NAP
 HEX-TRANS-2-EN-1-AL 20,900-31,000 SH
 NAP
 HEX-TRANS-2-EN-1-OL 400-600 SH
 HEX-CIS-3-EN-1-OL 1-1,500 LF NAP
 HEX-CIS-3-EN-1-OL 900-1,300 SH NAP
 HEX-CIS-3-EN-1-OL-ACETATE LF NAP
 HEX-CIS-3-EN-1-OL-BUTYRATE LF NAP
 HEX-CIS-3-EN-1-OL-CAPROATE LF NAP
 HEX-CIS-3-EN-1-OL-HEXANOATE 200-
 300 SH NAP
 BETA-GAMMA-HEXENOL LF
 HEXENOIC-ACID LF
 HEX-TRANS-3-ENYL-ACETATE LF NAP
 HEX-TRANS-3-ENYL-BUTYRATE LF
 NAP
 HEX-CIS-3-ENYL-HEX-TRANS-2-
 ENONATE LF NAP
 HEX-TRANS-3-ENYL-HEX-CIS-3-
 ENONATE LF NAP
 HEX-CIS-3-ENYL-FORMATE LF NAP
 HEX-TRANS-2-ENYL-FORMATE LF
 NAP
 HEX-TRANS-2-ENYL-HEXANOATE LF
 NAP
 HEX-TRANS-3-ENYL-METHYL-
 BUTYRATE LF NAP
 HEX-CIS-3-ENYL-PROPIONATE LF NAP
 HEX-TRANS-2-ENYL-PROPIONATE LF
 NAP
 HEX-TRANS-3-ENYL-PROPIONATE LF
 NAP
 HEXOIC-ACID LF
 N-HEXYL-ALCOHOL LF
 HEXYL-BUTYRATE LF NAP
 HEXYL-FORMATE LF NAP
 HEXYL-PHENYLACETATE LF NAP
 HISTIDINE LF
 6-HYDROXY-DIHYDROTHERASPIRANE
 LF NAP

2-HYDROXY-2,6,6-
 TRIMETHYLCYCLOHEXYLIDEN-1-
 ACETOLACTONE LF
 HYPEROSIDE LF NAP
 HYPOXANTHINE
 INDOLE LF NAP
 INOSITOL LF LF
 ALPHA-IONONE 300-500 SH NAP
 BETA-IONONE TR-31 LF NAP
 BETA-IONONE 1,700-2,900 SH NAP
 IRON 189-1,500 LF CRC WOI
 ISOAMYL-ACETATE LF
 ISOAMYL-ALCOHOL LF
 ISOBUTYL-ALCOHOL LF
 ISOBUTYRALDEHYDE LF
 ISOCAPRONIC-ACID
 5-ISOPROPYL-HEPTAN-2-ONE LF NAP
 ISOQUERCITRIN LF
 ISOTHEFLAVIN LF
 ISOVALERALDEHYDE LF
 ISOVITEXIN LF
 CIS-JASMONE TR-20 LF NAP
 CIS-JASMONENE LF
 JASMONIC-ACID FL NAP
 JASMONIC-ACID-METHYL-ESTER LF
 NAP
 KAEMPFERITRIN LF NAP
 KAEMPFEROL PL JLS58:142
 KAEMPFEROL-3-O-
 RHAMNODIGLUCOSIDE SH NAP
 KAEMPFEROL-3-RHAMNOGLUCOSIDE
 LF
 KAEMPFEROL-3-O-BETA-D-
 RUTINOSIDE LF NAP
 KAEMPFEROL-3-TRIGLUCOSIDE LF
 6-KETO-28-HOMOBRASSINOLIDE LF
 NAP
 6-KETO-28-NORBRASSINOLIDE LF NAP
 LAURIC-ACID SD NAP
 LEUCINE LF
 LINALOOL 6-1,984 LF NAP
 LINALOOL 4,000-10,300 SH NAP
 CIS-LINALOOLOXIDE 600-1,600 SH NAP
 TRANS-LINALOOLOXIDE 2-423 LF NAP
 TRANS-LINALOOLOXIDE 1,500-4,300
 SH NAP
 LINOLEIC-ACID SD NAP
 LOLIOLIDE LF NAP
 LUPEOL SD NAP
 LUTEIN LF
 LYCOPENE LF
 LYSINE LF
 MAGNESIUM 2,200 LF
 MALIC-ACID LF
 MANGANESE 1,200 LF
 MESOINOSITOL
 4-METHOXY-BENZALDEHYDE LF NAP
 3-METHOXY-PYRIDINE LF NAP
 METHYLAMINE 50 LF NAP
 N-METHYL-ANILINE LF NAP
 2-METHYL-BENZALDEHYDE LF NAP
 2-METHYL-BENZOTHAZOLE LF NAP
 5-METHYLCYTOSINE LF
 METHYL-TRANS-DIHYDROJASMONATE
 LF NAP
 24-METHYLENE-DAMMARENOL TR OI
 (SD) NAP
 METHYLETHYLKETONE LF
 2-METHYL-5-ETHYL-PYRIDINE LF NAP
 2-METHYL-6-ETHYL-PYRIDINE LF NAP
 5-METHYL-2-ETHYL-PYRAZINE LF
 NAP
 6-METHYL-2-ETHYL-PYRAZINE LF
 NAP
 2-METHYL-5-ETHYL-PYRIDINE LF NAP
 2-METHYL-6-ETHYL-PYRIDINE LF NAP
 4-METHYL-HEX-5-EN-4-OLIDE LF NAP
 24-METHYLLATHOSTEROL SD
 METHYL-MERCAPTAN LF
 S-METHYL-METHIONINE 70-245 LF
 NAP
 METHYL-OCTANOATE LF NAP
 5-METHYL-2-PHENYL-HEX-2-1-AL LF
 NAP
 4-METHYL-2-PHENYL-PENT-2-EN-1-AL
 LF NAP
 METHYL-PYRAZINE LF NAP
 2-METHYL-PYRIDINE LF NAP
 3-METHYL-PYRIDINE LF NAP
 4-METHYL-PYRIDINE LF NAP
 2-METHYL-QUINOLINE LF NAP
 6-METHYL-QUINOLINE LF NAP
 METHYL-SALICYLATE LF
 5-METHYL-THIAZOLE LF NAP
 MYRCENE LF NAP
 MYRICETIN PL JLS58:142
 MYRICETIN-3-GALACTOSIDE LF
 MYRICETIN-3-GLUCOSIDE LF
 MYRISTIC-ACID SD NAP
 NARINGENIN SH NAP
 NARINGENIN-FRUCTOSYL-GLUCOSIDE
 LF NAP
 NEOCHLOROGENIC-ACID LF
 NERAL LF NAP
 NEROL LF
 NEROLIDOL 800-1,200 SH NAP
 NIACIN 46-76 LF
 NICOTIFLORIN LF NAP

- NICOTINIC-ACID LF
 NONA-TRANS-2-CIS-4-DIEN-1-AL LF
 NAP
 NONA-TRANS-2-CIS-6-DIEN-1-AL LF
 NAP
 NONA-TRANS-2-TRANS-4-DIEN-1-AL
 LF NAP
 NONA-TRANS-2-EN-1-AL LF NAP
 NONAN-1-AL 400-600 SH NAP
 NONAN-2-ONE LF NAP
 28-NORBRASSINOLIDE LF NAP
 CIS-BETA-OCIMENE LF
 TRANS-BETA-OCIMENE LF
 OCTA-TRANS-2-CIS-4-DIEN-1-AL LF
 NAP
 OCTA-TRANS-2-TRANS-4-DIEN-1-AL LF
 NAP
 OCTA-TRANS-3-CIS-5-DIEN-2-ONE LF
 NAP
 OCT-TRANS-2-ENOIC-ACID SD NAP
 OCTAN-2-ONE LF NAP
 TRANS-2-OCTENAL LF
 N-OCTYL-ALCOHOL LF
 OLEIC-ACID SD NAP
 OOLONGHOMOBISFLAVAN-A 11 LF
 NAP
 OOLONGHOMOBISFLAVAN-B 7 LF
 NAP
 OOLONGTHEANIN 2 LF NAP
 OXALIC-ACID 2,192-10,000 LF NAP
 WBB
 3'-OXO-BETA-IONONE LF NAP
 PALMITIC-ACID LF
 PANTOTHENIC-ACID LF
 PECTINS 65,000 LF WOI
 PENTAN-1-OL 600-1,100 SH NAP
 PENT-CIS-3-EN-1-AL 2,100-2,300 SH NAP
 PENT-1-EN-3-OL 2,100-2,300 SH NAP
 PENT-CIS-2-EN-1-OL 1,000-1,400 SH NAP
 PHENOL LF NAP
 PHENOLS 50,000-270,000 LF AYL
 PHENYLACETALDEHUDE 15,200-17,800
 SH NAP
 PHENYLACETIC-ACID 1,850-3,130 LF
 2-PHENYLETHANOL LF NAP
 2-PHENYLETHYL-ALCOHOL 1,000-1,300
 SH NAP
 2-PHENYL-PYRIDINE LF NAP
 3-PHENYL-PYRIDINE LF NAP
 PHOSPHORUS 3,200-4,150 LF CRC
 PHYTOENE LF
 PHYTOFLUENE LF
 L-PIPECOLIC-ACID FR NAP
 POLYPHENOLS 222,000 LF AYL
 POLYPHENOL-OXIDASE
 POTASSIUM 17,600
 PROCYANIDIN-B-2 6 LF NAP
 PROCYANIDIN-B-2-3,3'-DI-O-GALLATE
 160 LF NAP
 PROCYANIDIN-B-2-3'-O-GALLATE 167
 LF NAP
 PROCYANIDIN-B-3 6-11 LF NAP
 PROCYANIDIN-B-4 13-47 LF NAP
 PROCYANIDIN-B-4-3'-O-GALLATE 141
 LF NAP
 PROCYANIDIN-B-5-3,3'-DI-O-GALLATE
 141 LF NAP
 PROCYANIDIN-C-1 3 LF NAP
 PRODELPHINIDIN-A-2-3'-O-GALLATE 4
 LF NAP
 PRODELPHINIDIN-B-2-3,3'-DI-O-
 GALLATE 18 LF NAP
 PRODELPHINIDIN-B-2-3'-O-GALLATE
 18-238 LF NAP
 PRODELPHINIDIN-B-4 10-57 LF NAP
 PRODELPHINIDIN-B-4-3'-O-GALLATE
 64 LF NAP
 PRODELPHINIDIN-B-5-3,3'-DI-O-
 GALLATE 30 LF NAP
 PROLINE LF
 PROPIONALDEHYDE LF
 PROPIONIC-ACID LF
 3-N-PROPYL-QUINOLINE LF NAP
 PROTEIN 172,000-283,000 LF CRC
 PSEUDOTARAXASTEROL SD NAP
 PYRIDINE LF NAP
 PYRROL-2-METHYLKETONE
 QUERCETIN 10,000 LF PAM
 QUERCETIN PL JLS58:142
 QUERCETIN-FRUCTOSYL-GLUCOSIDE
 LF NAP
 QUERCETIN-3-O-BETA-D-GALACTO-
 SIDE LF NAP
 QUERCETIN-3-O-BETA-D-GLUCOSIDE
 LF NAP
 QUERCETIN-3-O-
 RHAMNODIGLUCOSIDE SH NAP
 QUERCETIN-TRIGLUCOSIDE LF
 QUERCIMERITRIN LF NAP
 QUERCITRIN LF AYL
 QUINIC-ACID LF NAP
 QUINOLINE
 O-QUINONE LF WOI
 RIBOFLAVIN 8-12 LF CRC
 RUTIN 1,200 LF AYL NAP
 SAFRANAL LF NAP
 SAFROLE LF NAP
 SALICYLALDEHYDE LF

SALICYLIC-ACID LF
 SERINE LF
 BETA-SESQUIPHELLANDRENE LF NAP
 SILICA 240 LF
 BETA-SITOSTEROL SD NAP
 SODIUM 300-500 LF
 ALPHA-SPINASTEROL LF CCO
 ALPHA-SPINASTEROL-GENTIOBIOSIDE
 LF
 SPINASTERONE LF CCO
 STARCH 5,000 LF WOI
 STEARIC-ACID SD NAP
 DELTA-7-STIGMASTENOL LF CCO
 STRICTININ 130 LF NAP
 SULFUR 880 LF WOI
 TANNIC-ACID LF NAP
 TANNINS 33,800-270,000 LF AYL NAP
 TARAXEROL 20 OI (SD) MAP
 TEASTERONE LF NAP
 ALPHA-TERPINEOL 700,1,000 SH NAP
 4-TERPINEOL LF NAP
 2,6,10,14-TETRAMETHYL-
 PENTADECANE LF NAP
 TETRAMETHYLPYRAZINE LF NAP
 TETRAMETHYLTRIOXPURINE LF
 THEAFLAGALLIN 3-4 LF NAP
 THEAFLAVIN 5-19 LF NAP
 THEAFLAVIN 11,200-14,000 SH NAP
 THEAFLAVIN-ACID LF
 THEAFLAVIN-DIGALLATE LF NAP
 THEAFLAVIN-3-3'-DI-O-GALLATE 18-
 214 LF NAP
 THEAFLAVIN-3-GALLATE LF
 THEAFLAVIN-3-O-GALLATE 6-17 LF
 NAP
 THEAFLAVIN-3'-O-GALLATE 18-41 LF
 NAP
 THEANINE 5,777 CY NAP
 THEANINE 5,000-13,500 LF NAP
 THEANINE 4,560 SD NAP
 THEANINE 63 SH NAP
 THEANINE 35 ST NAP
 THEAFLAVIN-MONOGALLATE LF NAP
 THEARUBIGIN LF NAP
 THEARUBIGIN 135,600-157,400 SH NAP
 THEASAPONIN LF NAP
 THEASINENSIN-A 3-48,718 LF NAP
 THEASINENSIN-B 10-154 LF NAP
 THEASINENSIN-C 70 LF NAP
 THEASINENSIN-D 18 LF NAP
 THEASINENSIN-E 14 LF NAP
 THEASINENSIN-F 20 LF NAP
 THEASINENSIN-G 8 LF NAP
 THEASPIRANE LF NAP

THEASPIRONE LF NAP
 THEIFERIN-A LF
 THEIFERIN-B LF
 THEOBROMINE 500-1,100 LF HHB NAP
 THEOGALLIN 6 LF nap
 THEOPHYLLINE 2-4 LF HHB
 THEOPHYLLINE SD NAP
 THIAMIN 1-4 LF CRC
 THREONINE LF
 THYMOL LF CRC(FNS)
 TIRUCALLA-7,24-DIENOL SD
 5-ALPHA-TIRUCALLA-7,24-DIEN-3-
 BETA-OL 12 OI (SD) NAP
 TIRUCALLOL TR SD NAP
 O-TOLUIDENE LF NAP
 N-1-TRIACONTANOL LF CCO
 TRICETIN SH NAP
 TRICETINIDIN LF NAP
 1,4,6-TRI-O-GALLOYL-GLUCOSE 5-10
 LF NAP
 1,2,4-TRIHIDROXY-BENZENE LF NAP
 1,2,5-TRIHIDROXY-BENZENE LF NAP
 1,3,4-TRIHIDROXY-BENZENE LF NAP
 1,3,5-TRIHIDROXY-BENZENE LF NAP
 2,6,6-TRIMETHYL-CYCLOHEX-2-EN-1,4-
 DIONE LF NAP
 2,6,6-TRIMETHYL-CYCLOHEX-2-EN-1-
 ONE LF NAP
 TRIMETHYLPYRAZINE LF NAP
 2,4,5-TRIMETHYL-THIAZOLE LF NAP
 TYPHASTEROL LF NAP
 UNDECA-TRANS-2-EN-1-AL LF NAP
 UREA PL NAP
 VALERIC-ACID LF
 VALINE LF
 4-VINYL-PYRIDINE LF NAP
 VITEXIN LF NAP
 WATER 40,000-120,000 LF CRC
 VIOLAXANTHIN LF
 XANTHINE LF AYL
 O-XYLENOL LF CRC(FNS)
 ZEAXANTHIN LF
 ZINC 30 LF

CAMPTOTHECA ACUMINATA DECAISNE

"HAPPY TREE"

BETULIC-ACID FR 397/
 CAMPTOTHECIN 300 SD 396/
 CAMPTOTHECIN 100 ST 396/
 DEOXYCAMPTOTHECIN FR 397/
 GALLIC-ACID LF 399

20-HEXANOYLCAMPTOTHECIN BK 398/
 20-HEXANOYL-10-METHOXYCAMPTOTHECIN BK 398/
 10-HYDROXYCAMPTOTHECIN RT 397/
 11-HYDROXYCAMPTOTHECIN PL JSG
 QUERCETIN LF 399/
 TRIFOLIN LF 399/
 TRIMETHYLELLAGIC-ACID RT 397/
 VENOTERPENE RT 397/
 VINCOSIDE-LACTAM FR 397/

CANANGA ODORATA (LAM.)

HOOK. f & THOMSON

"CANANGA; YLANG-YLANG"

ACETIC-ACID FL GEO
 ACETONE FL GEO
 BENZALDEHYDE FL GEO
 BENZOIC-ACID FL GEO
 BENZYL-ACETATE FL GEO
 BENZYL-ALCOHOL FL GEO
 BENZYL-BENZOATE FL GEO
 BENZYL-SALICYLATE FL GEO
 BUTYL-ACETATE FL BML
 CADINENE FL GEO
 DELTA-CADINENE FL HHB
 EPSILON-CADINENE FL HHB
 GAMMA-CADINENE FL HHB
 L-CADINOL FL GEO
 CANANGINE PL JSG
 CARYOPHYLLENE FL HHB
 CREOSOL FL GEO
 P-CRESOL FL GEO
 P-CRESOL-METHYL-ETHER FL GEO
 P-CRESYL-ACETATE FL GEO
 EO 5,000-25,000 FL GEO WOI
 EUGENOL FL GEO
 EUGENOL-METHYL-ETHER FL GEO
 FARNESOL FL GEO
 FORMIC-ACID FL GEO
 FURFURAL FL GEO
 GERANIOL FL GEO
 GERANYL-ACETATE FL HHB
 ISOEUGENOL FL GEO
 ISOSAFROLE FL GEO
 L-LINALOOL FL GEO
 METHYL-ANTHRALINATE FL GEO
 METHYL-BENZOATE FL GEO
 2-METHYL-BUT-3-EN-2-OL FL HHB
 3-METHYL-BUT-2-EN-1-OL FL HHB
 3-METHYL-BUT-3-EN-1-OL FL HHB
 METHYL-SALICYLATE FL GEO

NEROL FL GEO
 NEROLIDIOL FL GEO
 PHENYLETHYL-ALCOHOL FL GEO
 D-ALPHA-PINENE 15-135 FL GEO
 SAFROLE FL GEO
 SALICYLIC-ACID FL GEO
 SAMPANGINE PL JSG
 SESQUITERPENES 1,650-14,625 FL GEO
 TERPENES 15-135 FL GEO
 P-TOLYLMETHYLETHER FL HHB
 YLANGENE PL JSG

CANARIUM INDICUM L.

"MANILA ELEMI; JAVA-OLIVE"

AMYRIN GUM AYL
 ANETHOLE 34,000-85,000 PL WOI
 ASH 38,500 SD WOI
 BREIN GUM AYL
 CARVONE 200-500 PL BML
 CARVOTANACETONE 100-250 EO BML
 1,8-CINEOLE 2,500-6,250 EO BML
 P-CYMENE 1,500-3,750 EO BML
 DIPENTENE GUM AYL
 ELEMADIENOLIC-ACID GUM AYL
 ELEMADIENONIC-ACID GUM AYL
 ELEMICIN 3,500-8,750 EO BML
 ELEMOL 15,000-37,500 EO BML
 EO 100,000-250,000 GUM AYL
 FAT 728,400 SD WOI
 ALPHA-HUMULENE 100-250 EO BML
 LIMONENE 54,100-135,250 EO BML
 LINOLEIC-ACID 136,210 SD WOI
 LINOLENIC-ACID 5,099 SD WOI
 MANILADIOL GUM AYL
 TRANS-P-MENTH-1(7),5-DIEN-2-OL
 300-750 EO BML
 METHYL-EUGENOL 300-750 EO BML
 MYRCENE 2,400-6,000 EO BML
 OLEIC-ACID 290,632 SD WOI
 PALMITIC-ACID 222,162 SD WOI
 ALPHA-PHELLANDRENE 15,100-37,750
 EO BML
 BETA-PHELLANDRENE 800-2,000 EO
 BML
 ALPHA-PINENE 400-1,000 EO BML
 PROTEIN 195,700 SD WOI
 RESIN (81.8%) GUM WOI
 STEARIC-ACID 74,297 SD WOI
 GAMMA-TERPINENE 400-1,000 EO BML
 TERPINEOL GUM AYL
 TERPINOLENE 600-1,500 EO BML
 WATER 37,600 SD WOI

CANAVALIA ENSIFORMIS (L.)
DC.

“JACK BEAN”

ALANINE SD HHB
L-ALPHA-AMINO-DELTA-
HYDROXYVALERIANIC-ACID SD
HHB
BETA-AMINOPROPIONITRILE SD HHB
ARGININE SD WOI
ARSENIC 0.02 SD CAL 1/
ASCORBIC-ACID 320-1,488 FR CRC
ASCORBIC-ACID 0-23 SD CRC
ASH 6,000-53,000 FR CRC
ASH 29,000-48,000 SD CRC
BETONICINE SD HHB
CALCIUM 330-5,263 FR CRC
CALCIUM 960-3,090 SD CAL CRC
CANALINE SD HHB
CANAVANINE SD CCO
CANEINE SD HHB
CARBOHYDRATES 79,000-902,000 FR
CRC
CARBOHYDRATES 538,000-687,000 SD
CRC
BETA-CAROTENE 0.24-2.2 FR CRC
BETA-CAROTENE 0-0.2 SD CRC
CHOLINE SD WOI
CONCAVALIN-A SD CCO
COPPER 7-8 SD CAL
DESAMINOCANAVANINE SD HHB
FAT 2,000-26,000 FR CRC
FAT 23,000-36,000 SD CRC
FIBER 18,000-481,000 FR CRC
FIBER 49,000-99,000 SD CRC
GLYCINE SD HHB
L-HOMOSERINE SD HHB
IRON 12-175 FR CRC
IRON 12-97 SD CAL CRC
KILOCALORIES 340-3,810 FR CRC
KILOCALORIES 3,310-3,920 SD CRC
KITOGINE SD WOI
MAGNESIUM 2,190 SD CAL
MANGANESE 11 SD CAL
NIACIN 20-93 FR CRC
NIACIN 18-35 SD CRC
PHOSPHORUS 100-3,509 FR CRC
PHOSPHORUS 2,700-3,898 SD CRC
POTASSIUM 7,500-16,600 SD CAL CRC
PROTEIN 27,000-321,000 FR CRC
PROTEIN 210,000-363,000 SD CRC
RIBOFLAVIN 1.0-4.7 FR CRC
RIBOFLAVIN 1.3-1.7 SD CRC

SERINE SD HHB
SODIUM 23-394 SD CAL CRC
THIAMIN 1-10 FR CRC
THIAMIN 4.6-8.6 SD CRC
TRIGONELLINE SD HHB
WATER 785,000-886,000 FR CRC
WATER 107,000-120,000 SD CRC
ZINC 20 SD CAL

1/ CAL mineral data may as well apply to *C.
gladiata* (CCO)

CANNA INDICA L.

“ACHIRA”

“QUEENSLAND ARROWROOT”

ASCORBIC-ACID 70-210 RT PAN
ASH 9,000-53,000 RT CRC PAN
CALCIUM 150-1,300 RT CRC PAN
CARBOHYDRATES 313,000-942,770 RT
PAN
BETA-CAROTENE 0.1-0.3 RT PAN
FAT 1,000-7,000 RT CRC PAN
FAT 5,000-8,000 SD CRC
FIBER 5,000-40,000 RT CRC PAN
IRON 14-42 RT PAN
KILOCALORIES 1,230-3,705 RT PAN
NIACIN 4-13 RT PAN
PHOSPHORUS 630-2,200 RT CRC PAN
PROTEIN 9,000-36,000 RT CRC PAN
PROTEIN 87,000-100,000 SD CRC
RIBOFLAVIN 0.1-0.3 RT PAN
THIAMIN 0.3-1 RT PAN
WATER 668,000 RT PAN

CAPPARIS SPINOSA L.

“CAPER”

ALKALOIDS 200 LF RIZK
ALKALOIDS 740 FR RIZK
ARABINOSE RIZK
ASH 132,000 LF WOI
CARBOHYDRATES 537,000 LF WOI
CHOLINE RIZK
CITRIC-ACID RIZK
COUMARIN RIZK
DEXTROSE FL
FAT 316,000-360,000 SD CRC WOI
FAT 15,000 LF WOI
FIBER 79,000 LF WOI
GLUCOCAPANGULIN RIZK
GLUCOCAPPARRIN SD HHB
GLUCOCLEOMIN RIZK

GLUCOIBERIN RIZK
 GLUCOSE RIZK
 GLUCURONIC-ACID RIZK
 LAURIC-ACID RIZK
 LINOLEIC-ACID RIZK
 LINOLENIC-ACID RIZK
 MYRISTIC-ACID RIZK
 OLEIC-ACID 132,720-165,600 SD WOI
 OXALIC-ACID RIZK
 PALMITIC-ACID
 PECTIC-ACID RIZK
 PENTOSAN 40,000 FL WOI
 PROTEIN 138,000 LF WOI
 PROTEIN 190,000-220,000 SD CRC
 QUERCETIN FL
 QUERCETIN-7-O-BETA-D-
 GLUCOPYRANOSIDE-BETA-L-
 RHAMNOPYRANOSIDE
 RHAMNOSE FL
 RUTIC-ACID RIZK
 RUTIN FL
 RUTINASE FL
 RUTINOSE FL
 SAPONIN RIZK
 SINIGRIN RIZK
 BETA-SITOSTEROL
 BETA-SITOSTEROL-BETA-D-GLU-
 COSIDE
 L-STACHYDRINE BK LF HHB
 STEARIC-ACID 11,060-16,200 SD WOI
 TANNIN RIZK
 TARTARIC-ACID
 WATER 696,000 LF WOI
 XYLOSE RIZK

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Flora of Qatar.

CANNABIS SATIVA L.

"MARIJUANA"

APIGENOL-O-GLUCOSIDE PL JSG
 ASCORBIC-ACID 0 SD CRC
 ASH 46,000-71,000 SD WOI
 CALCIUM 1,200-1,389 SD CRC
 CALCIUM-OXIDE 10,875-16,785 CRC
 WOI
 CANNABISATTVINE PL JSG
 CANNFLAVINS PL JSG
 BETA-CAROTENE 0-0.06 SD CRC
 CHLORIDE 35-55 SD CRC WOI
 EDESTIN SD WOI
 FAT 296,000-358,000 SD CRC WOI

FIBER 165,000-206,450 SD CRC WOI
 GLYCOCOLL SD WOI
 HISTIDINE SD WOI
 IRON 120-139 SD WOI
 IRON-OXIDE 460-710 SD CRC WOI
 ISOLINOLENIC-ACID 22,000-26,850 SD
 CRC WOI
 ISOVITEXIN-O-GLUCOSIDE PL JSG
 KILOCALORIES 4,210-4,870 SD CRC
 LINOLEIC-ACID 207,000-250,600 SD CRC
 WOI
 LINOLENIC-ACID 22,000-26,850 SD CRC
 WOI
 MAGNESIUM-OXIDE 2,620-4,050 CRC
 WOI
 NIACIN 21-24 SD CRC
 OLEIC-ACID 44,400-53,700 SD CRC WOI
 ORIENTIN PL JSG
 OXYPROLINE SD WOI
 PHOSPHORUS 9,700-11,227 SD WOI
 PHOSPHOROUS-OXIDE 16,770-25,885 SD
 CRC WOI
 POTASSIUM-OXIDE 9,290-14,440 SD
 CRC WOI
 PROTEIN 200,000-314,000 SD CRC WOI
 RIBOFLAVIN 1.7-2 SD CRC
 SILICON-DIOXIDE 5,475-8,450 SD CRC
 WOI
 SODIUM-OXIDE 360-550 SD CRC WOI
 SULFUR-OXIDE 85-135 SD CRC WOI
 THIAMIN 3.2-3.7 SD CRC
 TRYPTOPHAN SD WOI
 WATER 87,500-136,000 SD CRC WOI

CAPPARIS SPINOSA L.

"CAPER"

ALKALOIDS 200 LF 401/, 740 FR 401
 ARABINOSE PL 401/
 ASCORBIC-ACID 260-2,300 FL 407/
 ASH 79,000-140,000 FL 407
 CARBOHYDRATES 537,000 LF 1/
 CHOLINE 100 LF 401/, 370 FR 401/
 CITRIC-ACID PL 401/
 COUMARIN PL 401/
 DEXTROSE FL
 FAT 4,700 FL 407/
 FAT 37,500 FR 407/
 FAT 7,000-15,000 LF 1/ 407/
 FAT 316,000-346,000 SD 21/
 FIBER 79,000 LF 1/
 GLUCOCAPANGULIN PL 401/
 GLUCOCAPPARIN PL 401/

GLUCOCLEOMIN PL 401/
 GLUCOIBERIN PL 401/
 GLUCOSE PL 401/
 GLUCURONIC-ACID PL 401/
 KAEMPFEROL-3-RUTINOSIDE PL
 JSG
 LAURIC-ACID PL 401/
 LINOLEIC-ACID 700-2115 FL 407/
 LINOLENIC-ACID PL 401/
 MUCILAGE PL 401/
 MYRISTIC-ACID PL 401/
 OLEIC-ACID 277-2162 FL 407/
 OLEIC-ACID 132,720-165,600 SD 1/
 OXALIC-ACID PL 401/
 PALMITIC-ACID 1123 FL 407/
 PECTIC-ACID PL 401/
 PENTOSANS 40,000 FL 1/
 PROTEIN 138,000 LF 1/
 PROTEIN 190,000-220,000 SD 21/
 QUERCETIN-7-O-BETA-D-
 GLUCOPYRANOSIDE-
 BETA-L-RHAMNOPYRANOSIDE PL
 401/
 QUERCETIN-3-RUTINOSIDE PL JSG
 RIBOFLAVIN 0.890-2.16 FL 407/
 RUTIC-ACID PL 401/
 RUTIN PL 401/
 RUTINASE FL
 SAPONIN PL 401/
 SINIGRIN PL 401/
 BETA-SITOSTEROL PL 401/
 BETA-SITOSTEROL-BETA-D-GLU-
 COSIDE PL 401/
 L-STACHYDRINE 100 LF 401/ 370 FR
 401/
 STEARIC-ACID 348 FL 407/
 TANNIN PL 401/
 TARTARIC-ACID PL 401/
 THIAMINE 0.70-0.72 FL 407/
 WATER 696,000-795,000 FL 1/ 407/
 XYLOSE PL 401/

***CAPSELLA BURSAPASTORIS* (L.)
 MEDIKUS**

“SHEPHERD’S PURSE”

ACETYLCHOLINE PL 362/
 ADONITOL PL HHB
 P-AMINO BENZOSULFONIC-ACID PL
 HHB
 ARABINOSE PL HHB
 ARGININE PL 397/

ASCORBIC-ACID 360-5,500 PL CRC
 WBB
 ASH 19,000-161,000 PL CRC
 ASPARTIC-ACID PL 397/
 BURSIC-ACID PL 397/
 BURSINE PL WBB
 CALCIUM 2,080-17,627 PL CRC
 CARBOHYDRATES 52,000-441,000 PL
 CRC
 BETA-CAROTENE 2.6-22 PL CRC
 CHOLINE 2,000-10,000 PL 362/ 412/
 CITRIC-ACID PL WOI
 DIOSMETIN PL 397/
 DIOSMIN PL WOI
 FAT 3,200-42,000 PL 21/ 362/
 FAT 170,000-360,000 SD WOI
 FIBER 11,200-102,000 PL 21/ 362/
 FUMARIC-ACID 1,400 PL HHB WOI
 GLUCONAPIN PL HHB
 GLUTAMIC-ACID PL 397/
 HISTAMINE PL WBB?
 HYSSOPIN PL WOI
 INOSITOL 300 PL HHB WOI
 IRON 48-407 PL 21/
 KILOCALORIES 330-2,800 PL 21/
 LEUCINE PL 397/
 LUTEOLIN-7-GALACTOSIDE PL 33/
 LUTEOLIN-7-RUTINOSIDE PL 33/
 MALIC-ACID PL WOI
 MANNITOL PL HHB
 MANNOSE PL HHB
 METHIONINE PL 397/
 NIACIN 4-34 PL 21/
 N-NONACOSANE PL HHB
 OXALIC-ACID PL 397/
 PHOSPHORUS 600-7,288 PL 21/ 362/
 POTASSIUM 3,940-33,390 PL CRC
 PROLINE PL HHB
 PROTEIN 42,000-356,000 PL CRC
 PROTOCATECHUIC-ACID PL WOI
 PYRUVIC-ACID PL 397/
 RIBOFLAVIN 1.7-14.4 PL CRC
 RUTIN PL 412/
 SAPONINS PL 413/
 SINIGRIN PL 362/
 BETA-SITOSTEROL PL HHB
 SORBITOL PL HHB
 SUGARS 48,000 PL 362/
 SULFANILIC-ACID PL 397/
 TANNIC-ACID PL WOI
 TANNIN PL WBB
 TARTARIC-ACID PL WOI
 THIAMINE 2.5-21.2 PL CRC

THIOCYANIC-ACID PL WOI
 TYRAMINE PL 413/
 WATER 882,000 PL CRC
 XYLOSE PL HHB

CAPSICUM ANNUUM L.**"BELL PEPPER"**

ACETYLCHOLINE 15nM/G PC NAP
 ACETYLCHOLINE 105nM/G SD NAP
 ACETYLFURAN FR AAS170:141
 ALANINE 350-4,774 FR USA
 ALUMINUM 1-44 FR AAS HHB USG
 P-AMINO-BENZALDEHYDE 6 RT NAP
 AMMONIA(NH₃) 382 FR NAP
 BETA-AMYRIN SD NAP
 ANTHERAXANTHIN FR HHB
 APIIN FR HHB
 BETA-APO-8'-CAROTENAL FR NAP
 ARACHIDIC-ACID FR CCO
 ARGININE 410-5,592 FR USA
 ARSENIC 0.00355-0.015 FR USG
 ASH 5,000-122,000 FR AAS CRC USA
 USG
 ASCORBIC-ACID 230-20,982 FR CRC
 USA
 L-ASPARIGINASE FR NAP
 ASPARAGINE FR HHB
 ASPARTIC-ACID 1,200-16,504 FR USA
 AUROCHROME FR HHB
 BARIUM 2-8 FR USG
 BEHENIC-ACID FR CCO
 BETAINE FR CCO
 BORON 1-18 FR USG (-74) NAP
 BROMINE 0.1-111 FR AAS
 2,3-BUTANEDIOL FR AAS170:141
 2-BUTANONE FR AAS170:141
 CADMIUM 0.005-0.33 FR AAS USG
 CAFFEIC-ACID 11 FR NAP
 1-O-CAFFEYL-BETA-D-GLUCOSE FR
 NAP
 CALCIUM 36-1,956 (-3,900) FR CRC USA
 USG
 CAMPESTEROL FR CCO
 CAMPHENE FR AAS170:142
 CAPSAICIN 100-4,000 FR HHB NAP
 CAPSANTHIN FR CCO
 CIS-9-CAPSANTHIN FR NAP
 CIS-9'-CAPSANTHIN FR NAP
 CIS-13-CAPSANTHIN FR NAP
 CIS-13'-CAPSANTHIN FR NAP
 CAPSANTHIN-5,6-EPOXIDE FR HHB
 CAPSIAMIDE 20-200 FR CCO
 CAPSIANOSIDE-A 33-250 FR NAP

CAPSIANOSIDE-B 2-18 FR NAP
 CAPSIANOSIDE-C 35-103 FR NAP
 CAPSIANOSIDE-D 21-38 FR NAP
 CAPSIANOSIDE-E 15 FR NAP
 CAPSIANOSIDE-F 5 FR NAP
 CAPSIANOSIDE-I 18 FR NAP
 CAPSIANOSIDE-II 43-138 FR NAP
 CAPSIANOSIDE-III 15-105 FR NAP
 CAPSIANOSIDE-IV 9 FR NAP
 CAPSIANOSIDE-V 2 FR NAP
 CAPSIANSIDE-A 300 FR NAP
 CAPSICOSIDE-A-1 530 RT NAP
 CAPSICOSIDE-B-1 620 RT NAP
 CAPSICOSIDE-C-1 600 RT NAP
 CAPSIDIOL 29 FR NAP
 CAPSOCHROME FR NAP
 CAPSOLUTEIN FR HHB
 CAPSORUBIN FR HHB
 CARBOHYDRATES 53,100-813,000 FR
 CRC USA
 DELTA-3-CARENE FR AAS170:142
 CARNAUBIC-ACID SD HHB
 ALPHA-CAROTENE FR HHB
 BETA-CAROTENE 0-462 FR CRC USA 1/
 BETA-CAROTENE-EPOXIDE FR HHB
 NEO-BETA-CAROTENE
 ZETA-CAROTENE FR NAP
 CARYOPHYLLENE FR AAS170:142
 CHLOROGENIC-ACID FR NAP
 CHOLINE 297 PC NAP
 CHOLINE 360 SD NAP
 CHROMIUM 0-0.546 FR USG
 CINNAMIC-ACID TC NAP
 CITRIC-ACID FR HHB
 CITROSTADIENOL SD NAP
 CITROXANTHIN FR HHB
 CITRULLIN FR HHB
 COBALT 0.001-0.1 (-151 PED) FR AAS
 USG
 COPPER 0.5-20 FR AAS CRC USA USG
 ALPHA-COPAENE FR AAS170:142
 P-COUMARIC-ACID 79 FR NAP
 N-TRANS-P-COUMAROYL-
 OCTOPAMINE 1 RT NAP
 N-TRANS-P-COUMAROYL-TYRAMINE 2
 RT NAP
 CYCLOHEXANONE FR AAS170:141
 CRYPTOCAPSIN FR HHB
 CRYPTOXANTHIN FR HHB
 ALPHA-CRYPTOXANTHIN PL JSG
 BETA-CRYPTOXANTHIN FR NAP
 CYCLOARTANOL SD NAP
 CYCLOARTENOL SD NAP
 CYCLOEUCALENOL SD NAP

CYCLOPENTANOL FR AAS170:141
 P-CYMENTHENE FR AAS170:142
 CYSTINE 160-2,182 FR USA
 DECANOIC-ACID-VANILLYLAMIDE 1-68 FR USA
 DEHYDROASCORBIC-ACID 20,000 FR NAP
 DIHYDROCAPSAICIN 75-1,628 FR HHB
 CIS-9,10-DIHYDRO-CAPSENONE 1 TC NAP
 5,6-DIHYDROXY-5,6-DIHYDRO-ZEAXANTHIN FR NAP
 4-ALPHA-24- DIMETHYL-CHOLESTA-7,24-DIEN-3-BETA-OL SD NAP
 2,3-DIMETHYL-5-ETHYLPYRAZINE FR AAS170:142
 2,3-DIMETHYLPYRAZINE FR AAS170:142
 DIN-N-PROPYL-AMINE 0.3 FR NAP
 EO 16,000 FR HHB
 3,6-EPOXIDE-5-HYDROXY-5,6-DIHYDRO-ZEAXANTHIN FR CAP
 ERIDICTIN FR HHB
 24-(R)-ETHYL-LOPHENOL SD NAP
 ETHYL-3-METHYLBUTYRATE FR AAS170:142
 EUGENOL FR AAS170:142
 FAT 100,000-150,000 SD HHB
 FAT 2,000-144,000 FR CRC USA
 1-O-FERULOYL-BETA-D-GLUCOSE FR NAP
 N-TRANS-FERULOYL-OCTOPAMINE 1-2 RT NAP
 N-CIS-FERULOYL-TYRAMINE 2 RT NAP
 N-TRANS-FERULOYL-TYRAMINE 12 RT NAP
 FIBER 12,000-351,000 FR CRC USA
 FLUORINE 0.05-1 FR AAS
 FOLACIN 0-3 FR USA
 FOLIAXANTHIN FR HHB
 FUNKIOSIDE RT NAP
 GALACTOSAMINE FR NAP
 GALACTOSE FR HHB
 GLUCOSAMINE FR NAP
 GLUCOSE FR HHB
 GLUTAMIC-ACID 1,120-15,277 FR USA
 GLUTAMINASE FR NAP
 GLYCINE 310-4,228 FR USA
 GRAMISTEROL SD NAP
 GROSSAMIDE 3 RT NAP
 HENEICOSANE FR CCO
 HEPTADECANE FR CCO
 HESPERIDIN FR HHB
 HEXADECANE FR CCO
 HEXANAL FR CCO
 HEXAN-1-AL FR NAP
 N-HEXANAL FR AAS170:141
 HEXANOIC-ACID FR AAS170:141
 1-HEXANOL FR AAS170:141
 2-HEXANOL FR AAS170:141
 3-HEXANOL FR AAS170:141
 2-HEXANONE FR AAS170:141
 HISTIDINE 170-2,319 FR USA
 HOMOCAPSAICIN 2-90 FR CRC HHB
 HOMODIHYDROCAPSAICIN 2-90 FR CRC HHB
 HYDROXYBENZOIC-ACID-4-BETA-D-GLUCOSIDE FR NAP
 5-HYDROXY-CAPSANTHIN-5,6-EPOXIDE FR HHB
 HYDROXY-ALPHA-CAROTENE FR HHB
 3-HYDROXY-ALPHA-CAROTENE FR HHB
 IRON 4-286 FR CRC USA
 3-ISOBUTYL-2-METHOXYPYRAZINE FR ACS170:138
 ISOHEXYL-ISOCAPROATE FR AYL
 ISOLEUCINE 270-3,683 FR USA
 3-ISOPROPYL-2-METHOXYPYRAZINE FR ACS170:138
 LANOSTENOL PL JSG
 LANOSTEROL SD NAP
 LANOST-8-EN-3-BETA-OL SD NAP
 LEAD 0.004-2 FR AAS USG
 LEUCINE 440-6,002 FR USA
 LIMONENE FR AAS170:142
 LINALOOL FR AAS170:141
 LINOLEIC-ACID 2,190-29,871 FR USA
 ALPHA-LINOLENIC-ACID 220-3,001 FR USA
 LITHIUM 0.284-0.4 FR USG
 LOPHENOL SD NAP
 LUPEOL SD NAP
 LUTEIN FR HHB
 LUTEOLIN-7-O-BETA-APIOGLUCOSIDE LF NAP
 LUTEOLIN-7-O-BETA-DIGLUCOSIDE LF NAP
 LUTEOLIN-7-O-BETA-D-GLUCOSIDE LF NAP
 LYSINE 380-5,183 FR USA
 MAGNESIUM 118-2,340 (-3,000) FR PED USA USG
 MALONIC-ACID LF FR WOJ
 MANGANESE 0.7-39 FR AAS USA USG
 MARGARIC-ACID FR CCO

- MERCURY 0.00071-0.001 FR USG
 METHIONINE 100-1,364 FR USA
 2-METHOXY-3-ISOBUTYLPYRAZINE FR
 AAS170:142
 2-METHYL-BUTANAL FR AAS170:141
 3-METHYL-BUTANAL FR AAS170:141
 2-METHYL-BUTAN-1-OL FR AAS170:141
 2-METHYL-BUTAN-2-OL FR AAS170:141
 4-ALPHA-METHYL-5-ALPHA-CHOLEST-
 8(14)-EN-3-BETA-OL SD NAP
 24-METHYLENE-CYCLOARTANOL SD
 NAP
 N-METHYL-ANILINE 13.1 FR NAP
 2-METHYL-BUTYRIC-ACID FR
 AAS170:141
 3-METHYL-BUTYRIC-ACID FR
 AAS170:141
 2-METHYL-5-ETHYLPYRAZINE FR
 AAS170:142
 5-METHYL-2-FURFURAL FR
 AAS170:141
 4-METHYL-HEPTADECANE FR NAP
 4-METHYL-HEXADECANE FR NAP
 24-METHYL-LANOST-9(11)-EN-3-BETA-
 OL SD NAP
 24-METHYL-LOPHENOL SD NAP
 4-METHYLPENTADECANE FR CCO
 4-METHYL-PENTANOIC-ACID FR
 AAS170:141
 2-METHYL-PENTAN-2-OL FR
 AAS170:141
 3-METHYL-PENTAN-3-OL FR
 AAS170:141
 4-METHYL-3-PENTEN-2-ONE FR
 AAS170:141
 3-METHYL-1-PENTYL-3-METHYL-
 BUTYRATE FR AYL
 4-METHYL-1-PENTYL-2-METHYL-
 BUTYRATE FR AYL
 2-METHYL-PROPIONIC-ACID FR
 AAS170:141
 4-METHYLTETRADECANE FR CCO
 4-METHYLTRIDECANE FR CCO
 N-(13-
 METHYLTETRADECYL)ACETAMIDE
 300-400 FR CCO NAP
 MOLYBDENUM 0-15 FR AAS USG
 MYRCENE FR AAS170:142
 MYRISTIC-ACID 10-136 FR USA
 MYRISTIC-ACID FR NAP
 NEOXANTHIN FR HHB
 NIACIN 4-172 FR CRC USA
 NICKEL 0.05-5.5 FR AAS USG
 NITROGEN 1,900-23,330 FR AAS
 N-NITROSO-DIMETHYLAMINE FR NAP
 N-NITROSO-PYRROLIDINE FR NAP
 NONADECANE FR CCO
 NONANOIC-ACID-VANILLYLAMIDE 2-
 45 FR CRC 2/
 NORCAPSAICINE FR NAP
 31-NORCYCLOARTANOL SD NAP
 NORDIHYDROCPSAICIN 15-335 FR
 HHB
 31-NOR-LANOSTEROL SD NAP
 31-NOR-LANOST-8-EN-3-BETA-OL SD
 NAP
 31-NOR-LANOST-9(11)-EN-3-BETA-OL
 SD NAP
 OBTUSIFOLIOL SD NAP
 OCTANE FR AAS170:142
 OCTANOIC-ACID FR AAS170:142
 OLEIC-ACID 270-3,582 FR USA
 OLEIC-ACID SD HHB
 OXALIC-ACID 257-1,171 FR WBB
 PALMITIC-ACID 500-6,820 FR USA
 PALMITIC-ACID SD HHB
 PALMITOLEIC-ACID 30-409 FR USA
 PANTOTHENIC-ACID 0-5 FR USA
 PENTADECANE FR CCO
 PENTADECANOIC-ACID FR CCO
 N-PENTYLAMINE 3 FR NAP
 2-PENTYLFURAN FR AAS170:142
 2-PENTYLPYRIDINE FR AAS170:142
 ALPHA-PHELLANDRENE FR
 AAS170:142
 PHENYLALANINE 260-3,546 FR USA
 PHOSPHATIDYL-GLYCEROL FR NAP
 PHOSPHODIESTERASE TC NAP
 PHOSPHORUS 186-3,885 FR AAS USA
 USG
 PHYTOENE FR NAP
 PHYTOFLUENE FR NAP
 ALPHA-PINENE FR AAS170:142
 BETA-PINENE FR AAS170:142
 PIPERIDINE 5.2 FR NAP
 PORPHOBILINOGEN-OXYGENASE LF
 NAP
 POTASSIUM 1,862-35,000 FR CRC USA
 USG
 PROLINE 370-5,047 FR CRC USA
 N-PROPYLAMINE 2.3 FR NAP
 PROTEIN 8,000-184,000 FR CRC USA
 PULEGONE FR CCO
 PYRROLIDINE 1.4 FR NAP
 RIBOFLAVIN 0-19 FR CRC USA
 RUBIDIUM 0.38-10 FR AAS
 SABINENE FR AAS170:142
 SCOPOLETIN FR CRC

3-(SEC-BUTYL)-2-METHOXYPYRAZINE
FR ACS170:138
SELENIUM 0.00142-0.002 FR USG
SERINE 340-4,638 FR USA
SILICON 1-33 FR AAS
SILVER 0.071-0.1 FR USG
BETA-SITOSTEROL PL PAS
SKATOLE-PYRROLO-OXYGENASE LF
NAP
SODIUM 25-625 FR CRC USA
SOLANIDINE FR HHB
SOLANINE FR HHB
SOLANINE 500 LF NAP
SOLASODINE FR CRC
STEARIC-ACID 160-2,180 FR USA
STEARIC-ACID SD HHB
STIGMASTEROL FR CCO
STRONTIUM 2-12 FR USG
SULFOQUINOVOSYL-DIACYL-GLYC-
EROL FR NAP
SULFUR 190-2,440 FR AAS USG
GAMMA-TERPINENE FR AAS170:142
TERPINEN-4-OL FR AAS170:141
ALPHA-TERPINEOL FR AAS170:141
TERPINOLENE FR AAS170:142
TETRADECANE FR CCO
TETRAMETHYLPYRAZINE FR
AAS170:142
THIAMIN 1-15 FR USA
THREONINE 310-4,228 FR USA
ALPHA-THUJENE FR AAS170:142
TIN 5 FR PED
TITANIUM 0.355-16 FR USG
TOCOPHEROL 24 FR WOI
ALPHA-TOCOPHEROL 22-284 FR
TOT
TOLUENE FR AAS170:142
TRIGONELLINE 0.6 SD NAP
4-ALPHA-14-ALPHA-24-TRIMETHYL-
CHOLESTA-8(24)-DIEN-3-BETA-OL SD
NAP
2,3,5-TRIMETHYLPYRAZINE FR
AAS170:142
TRYPTOPHAN 110-1,500 FR USA
TRYPTOPHAN-PYRROLO-OXYGENASE
LF NAP
TYROSINE 180-2,455 FR USA
VALINE 360-4,910 FR USA
VANILLOYL-GLUCOSE FR NAP
VANILLYL-CAPROYLAMIDE FR NAP
VANILLYL-DECANAMIDE FR NAP
VANILLYL-OCTANAMIDE FR NAP
VIOLAXANTHIN FR HHB
VIT-B6 2-22 FR USA

WATER 742,000-937,000 FR PED WOI
USG
XANTHOPHYLL PL JSG
XANTHOPHYLL-EPOXIDE FR HHB
P-XYLENE FR AAS170:142
XYLOSE FR HHB
ZEAXANTHIN FR CAP
ZINC 1-77 FR PED USA USG
ZIRCONIUM 1.4-2 FR USG

AAS=ACTA AGRIC SCAND SUPPL
22:1980. H2O=91%; ZMB=11.1 X APB
Many books do not discriminate the species,
C. annuum becoming the catchall species.
C. frutescens was copied from C annuum,
as though all compounds were there, from
HHB, WOI, CRC. NAP was treated
separately. 2/Fractionated against 48.6%
capsaicin in CRC.

CAPSICUM FRUTESCENS L.

"CAYENNE; CHILI; TABASCO"

ACETIC-ACID RE NAP
ALANINE 820-6,691 FR USA
ALUMINUM FR
ANTHERAXANTHIN FR
APIIN FR
ARACHIDIC-ACID FR
ARGININE 960-7,834 FR USA
ASH 6,000-65,000 FR CRC USA ABS 5/
ASCORBIC-ACID 350-19,992 FR CRC
USA
ASPARAGINE FR
ASPARTIC-ACID 2,860-23,338 FR USA
AUROCHROME FR
BARIUM FR
BEHENIC-ACID FR
BENZALDEHYDE FR AAS170:141
BORON 4-17 FR BOB
BUTYRIC-ACID RE NAP
BETAINE FR
CAFFEIC-ACID 32 FR NAP
CALCIUM 175-1,560 FR CRC USA
CAMPESTEROL FR
CAMPHOR FR AAS170:141
CAPROIC-ACID RE NAP
CAPSAICIN 100-17,900 FR HHB 411/NAP
CAPSANTHIN FR
CAPSANTHIN-5,6-EPOXIDE FR
CAPSIAMIDE 20-200 FR
CAPSIDOL PL NAP
CAPSIDOL PL JSG
CAPSOLUTEIN FR
CAPSORUBIN FR

- CARBOHYDRATES 87,000-849,000 FR
CRC USA
- DELTA-3-CARENE FR AAS170:142
- CARNAUBIC-ACID SD
- ALPHA-CAROTENE FR
- BETA-CAROTENE 1-38 FR CRC USA 1/
- BETA-CAROTENE-EPOXIDE FR
- NEO-BETA-CAROTENE
- CARVONE FR AAS170:141
- CARYOPHYLLENE FR AAS170:142
- CHLOROGENIC-ACID ST
- CHROMIUM 3.0-3.5 FR ABS 5/
- 1,8-CINEOLE FR AAS170:142
- CITRIC-ACID FR
- CITROXANTHIN FR
- CITRULLIN FR
- COBALT 0.5-0.8 FR ABS 5/
- COPPER 2-14 FR CRC USA
- P-COUMARIC-ACID 540 FR NAP
- CRYPTOCAPSIN FR
- CRYPTOXANTHIN FR
- CYSTINE 380-3,101 FR USA
- DECANOIC-ACID-VANILLYLAMIDE 1-
68 FR
- 2-DECENOIC-ACID FR AAS170:142
- DIHYDROCAPSAICIN 75-1,628 FR
- EO 16,000 FR
- ERIODICTIN FR
- ETHYL-DODECANOATE FR AAS170:142
- ETHYL-OCTANOATE FR AAS170:142
- ETHYL-TETRADECANOATE FR
AAS170:142
- FAT 100,000-150,000 SD
- FAT 1,000-16,320 FR CRC USA
- FIBER 18,000-146,880 FR CRC USA
- FOLACIN 0-2 FR USA
- FOLIA XANTHIN FR
- GALACTOSE FR
- GERANYLACETONE FR AAS170:141
- GLUCOSE FR
- GLUTAMIC-ACID 2,640-21,542 FR USA
- GLYCINE 740-6,038 FR USA
- HENEICOSANE FR
- HEPTADECANE FR AAS170:142
- HEPTANOIC-ACID FR AAS170:141
- 2-HEPTANONE FR AAS170:141
- HESPERIDIN FR
- HEXADECANE FR AAS170:142
- N-HEXANAL FR AAS170:141
- HEXANOIC-ACID FR AAS170:141
- 1-HEXANOL FR AAS170:141
- 2-HEXANOL FR AAS170:141
- CIS-3-HEXEN-1-OL FR AAS170:141
- TRANS-2-HEXEN-1-OL FR AAS170:141
- HISTIDINE 410-3,346 FR USA
- HOMOCAPSAICIN 2-90 FR
- HOMODIHYDROCAPSAICIN 2-90 FR
- HYDROXY-ALPHA-CAROTENE FR
- 3-HYDROXY-ALPHA-CAROTENE FR
- BETA-IONONE FR AAS170:141
- IRON 7-135 FR CRC USA
- 3-ISOBUTYL-2-METHOXYPYRAZINE FR
ACS170:138
- ISOBUTYRIC-ACID RE NAP
- ISOHEXANOIC-ACID RE NAP
- ISOHEXYL-ISOCAPROATE FR
- ISOLEUCINE 650-5,304 FR USA
- ISOTHUJONE FR AAS170:141
- ISOVALERIC-ACID RE NAP
- KAEMPFEROL? AN NAP
- LAURIC-ACID RE NAP
- LEUCINE 1,050-8,568 FR USA
- LIMONENE FR AAS170:142
- LINOLEIC-ACID 1,040-8,486 FR USA
- ALPHA-LINOLENIC-ACID 50-408 FR
USA
- LITHIUM FR
- LUTEIN FR
- LUTEOLIN-7-MONOGLUCOSIDE FR
- LYSINE 890-7,262 FR USA
- MAGNESIUM 230-2,203 FR USA
- MALONIC-ACID LF FR
- MANGANESE 2-20 FR USA
- MARGARIC-ACID FR
- METHIONINE 240-1,958 FR USA
- 2-METHOXY-3-ISOBUTYLPYRAZINE FR
AAS170:142
- P-METHYL-ACETOPHENONE FR
AAS170:141
- 2-METHYL-BUTANAL FR AAS170:141
- 3-METHYL-BUTANAL FR AAS170:141
- 3-METHYL-BUTAN-1-OL FR AAS170:141
- 2-METHYL-BUTYRIC-ACID FR
AAS170:141
- METHYL-DECANOATE FR AAS170:142
- METHYL-DODECANOATE FR
AAS170:142
- 5-METHYL-2-FURFURAL FR
AAS170:141
- 4-METHYLHEPTADECANE FR
- METHYL-HEPTANOATE FR AAS170:142
- 4-METHYLHEXADECANE FR
- METHYL-HEXADECANOATE FR
AAS170:142
- METHYL-HEXANOATE FR AAS170:142
- METHYL-8-METHYL-6-NONANOATE
FR AAS170:142
- METHYL-NONANOATE FR AAS170:142

- 8-METHYL-NONANOATE FR
AAS170:142
- 8-METHYL-NONANOIC-ACID FR
AAS170:142
- METHYL-OCTADECANOATE FR
AAS170:142
- METHYL-OCTANOATE FR AAS170:142
- 7-METHYL-OCTANOIC-ACID FR
AAS170:142
- 4-METHYLPENTADECANE FR
METHYL-PENTANOATE FR AAS170:142
- 4-METHYL-PENTANOIC-ACID FR
AAS170:141
- 4-METHYL-PENTAN-1-OL FR
AAS170:141
- 4-METHYL-3-PENTEN-2-ONE FR
AAS170:141
- 4-METHYLPENTYL-2-METHYL-
BUTYRATE FR AAS170:142
- 4-METHYLPENTYL-3-METHYL-
BUTYRATE FR AAS170:142
- METHYL-PHENYLACETATE FR
AAS170:142
- METHYL-BETA-PHENYLPROPIONATE
FR AAS170:142
- 4-METHYLTETRADECANE FR
METHYL-TETRADECANOATE FR
AAS170:142
- 4-METHYLTRIDECANE FR
N-(13-METHYLTETRADECYL)
ACETAMIDE FR
- MEVALONIC-ACID 0.5 FR NAP
- MYRCENE FR AAS170:142
- MYRISTIC-ACID 10-82 FR USA
- MYRISTIC-ACID SD
- NEOXANTHIN FR
- NIACIN 9-158 FR CRC USA
- NICKEL 1.0-1.5 FR ABS 5/
NONADECANE FR
- NONANOIC-ACID FR AAS170:142
- NONANOIC-ACID-VANILLYLAMIDE 2-
45 FR 2/
- NORDIHYDROCAPSAICIN 15-335 FR
- OCTANOIC-ACID FR AAS170:142
- 2-OCTANONE FR AAS170:141
- 2-OCTENOIC-ACID FR AAS170:142
- OLEIC-ACID 110-898 FR USA
- OLEIC-ACID SD
- OXALIC-ACID FR LF
- PALMITIC-ACID 150-1,224 FR USA
- PALMITIC-ACID SD
- PALMITOLEIC-ACID 0 FR USA
- PANTOTHENIC-ACID 1-5 FR USA
- PENTADECANE FR AAS170"142
- PENTADECANOIC-ACID FR
- PENTANOIC-ACID FR AAS170:141
- 1-PENTANOL FR AAS170:141
- 2-PENTYLFURAN FR AAS170:142
- ALPHA-PHELLANDRENE FR
AAS170:142
- BETA-PHENETHYLACETATE FR
AAS170:142
- PHENYLALANINE 620-5,059 FR USA
- PHOSPHORUS 455-3,794 FR USA
- BETA-PINENE FR AAS170:142
- POTASSIUM 2,600-34,272 FR CRC USA
- PROLINE 870-7,099 FR CRC USA
- PROTEIN 11,000-163,200 FR CRC
USA
- PULEGONE FR
- QUERCETIN 63 FR PAM
- RIBOFLAVIN 1-8 FR CRC USA
- SCOPOLETIN FR
- SERINE 800-6,528 FR USA
- SILICON FR
- SODIUM 50-734 FR CRC USA
- SOLANIDINE FR
- SOLANINE FR
- SOLASODINE FR
- STEARIC-ACID 30-245 FR USA
- STEARIC-ACID SD
- STIGMASTEROL FR
- TERPINEN-4-OL FR AAS170:141
- ALPHA-TERPINEOL FR AAS170:141
- TETRADECANE FR
- THIAMIN 0-8 FR USA
- THREONINE 740-6,038 FR USA
- THUJONE FR AAS170:141
- TITANIUM FR
- TOCOPHEROL 24 FR
- TOLUENE FR AAS170:142
- TRYPTOPHAN 260-2,122 FR USA
- TYROSINE 420-3,427 FR USA
- 2-UNDECANONE FR AAS170:141
- VALERIC-ACID RE NAP
- VALINE 840-6,854 FR USA
- VIT-B6 3-23 FR USA
- VANILLYL-AMIDE FR
- VIOLAXANTHIN FR
- WATER 70,000-889,550 FR CRC USA
ABS 5/
- XANTHOPHYLL-EPOXIDE FR
- P-XYLENE FR AAS170:142
- XYLOSE FR
- ZEAXANTHIN FR
- ZINC 3-24 FR USA

CARICA PAPAYA L.

"PAPAYA"

N-ACETYL-HEXOSAMIDASE LX HHB

ALANINE 140-1,253 FR USA

ALKALOIDS 1,300-1,500 LF EB10:259

AMYL-ACETATE FR HHB

ARGININE 100-895 FR USA

ASCORBIC-ACID 330-5,732 FR PED USA
WOIASCORBIC-ACID 1,400-6,222 LF CRC
WOI

ASH 5,800-57,280 FR USA

ASH 22,000-154,000 LF CRC

ASH 88,000 SD WOI

ASPARTIC-ACID 490-4,387 FR USA

BEHENIC-ACID SD HHB

BENZALDEHYDE FR JAF38:1062

BENZYL-ISOTHIOCYANATE FR
JAF38:1062

BENZYLSENEVOL SD 411/

BORON 5-15 FR JFS51:523

BUTYL-ALCOHOL FR HHB

BUTYL-BENZOATE FR JAF38:1062

BUTYL-HEXANOATE FR JAF38:1062

CALCIUM 100-2,792 FR PED USA WOI

CALCIUM 3,440-23,800 LF CRC

CALLOSE LX HHB

CAOUTCHOUC 45,000 LX WOI

CARBOHYDRATES 95,000-991,000 FR
PED WOICARBOHYDRATES 113,000-556,000 LF
CRC

CARBOHYDRATES 155,000 SD WOI

CARICIN SD WOI

BETA-CAROTENE 10-123 FR USA

BETA-CAROTENE 116-514 LF CRC

EPSILON-CAROTENE FR HHB

GAMMA-CAROTENE FR HHB

CARPAINE BK, RT, SD WOI

CARPAINE 1,000-1,500 LF HHB

CARPASEMINE SD WOI

CARPOSIDE LF WOI

CARYOPHYLLENE FR JAF38:1062

CHRYSANTHEMEXANTHIN FR HHB

CHYMOPAPAIN-A LX HHB

CHYMOPAPAIN-B LX HHB

CITRIC-ACID FR WOI

COPPER 0.1-5 FR USA JFS51:523

COTININE PL HHB

DECANAL FR JAF38:1062

DEHYDROCARPAINES >1,000 LF JFM

DEHYDROCARPAMINES PL JSG

EO 900 SD WOI

ETHYL-ACETATE FR JAF38:1062

ETHYL-ALCOHOL FR HHB

ETHYL-BENZOATE FR JAF38:1062

ETHYL-BUTYRATE FR JAF38:1062

ETHYL-OCTANOATE FR JAF38:1062

FAT 980-22,000 FR PED USA WOI

FAT 8,000-136,000 LF CRC

FAT 24,000 LX WOI

FAT 253,000 SD WOI

FIBER 6,960-75,538 FR USA

FIBER 18,000-145,000 LF CRC

FIBER 170,000 SD WOI

FLAVONOLS 0-2,000 LF EB10:259

D-GALACTOSE FR HHB

D-GALACTURONIC-ACID FR HHB

GERANYL-ACETONE FR JAF38:1062

GERMACRENE-D FR JAF38:1062

GLUCOTROPAEOLIN PL HHB

GLUTAMIC-ACID FR USA

GLYCINE 180-1,611 FR USA

HEPTANAL FR JAF38:1062

HEPTAN-2-ONE FR JAF38:1062

HEXADECENOIC-ACID SD HHB

HEXANAL FR JAF38:1062

HISTIDINE 50-448 FR USA

4-HYDROXY-4-METHYL-PENTAN-2-ONE
FR JAF38:1062

IRON 0.8-38 FR PED USA WOI

IRON 8-38 LF CRC

ISOAMYL-ACETATE FR HHB

ISOLEUCINE 80-716 FR USA

KILOCALORIES 390-3,491 FR USA

KILOCALORIES 740 LF CRC

KRYPTOFLAVIN FR HHB

KRYPTOXANTHIN FR WOI

LAURIC-ACID 10-90 FR USA

LAURIC-ACID SD HHB

LEUCINE 160-1,432 FR USA

LINALOOL FR JAF38:1062

LINALOOL-OXIDE-A FR JAF38:1062

LINALOOL-OXIDE-B FR JAF38:1062

LINOLEIC-ACID 60-537 FR USA

LINOLEIC-ACID 5,389 SD WOI

ALPHA-LINOLENIC-ACID 250-2,238 FR
USA

LYCOPENE FR HHB

LYSINE 250-2,238 FR USA

MAGNESIUM 82-1,058 FR USA

MALIC-ACID FR WOI

MALIC-ACID 4,400 LX WOI

MANGANESE 0.1-1.1 FR USA

METHIONINE 20-179 FR USA

METHYL-ACETATE FR HHB

METHYL-ALCOHOL FR HHB
 3-METHYL-BUTYL-BENZOATE FR
 JAF38:1062
 METHYL-GERANATE FR JAF38:1062
 6-METHYLKEPT-5-EN-2-ONE FR
 JAF38:1062
 METHYL-HEXANOATE FR JAF38:1062
 METHYL-OCTANOATE FR JAF38:1062
 METHYL-SALICYLATE FR JAF38:1062
 METHYL-THIOCYANATE FR
 JAF38:1062
 5,6-MONOEPOXI-BETA-CAROTENE FR
 HHB
 MUFA 380-3,402 FR USA
 MUTATOCHROM FR HHB
 MYOSMINE PL HHB
 MYRCENE FR JAF38:1062
 MYRISTIC-ACID 70-627 FR USA
 MYRISTIC-ACID SD HHB
 MYROSIN SD WOI
 NEOXANTHIN FR HHB
 NIACIN 3-33 FR USA
 NIACIN 21-93 LF CRC
 NICOTINE PL HHB
 NONANAL FR JAF38:1062
 (E)-BETA-OCIMENE FR JAF38:1062
 (Z)-BETA-OCIMENE FR JAF38:1062
 GAMMA-OCTALACTONE FR
 JAF38:1062
 OCTANAL FR JAF38:1062
 OLEIC-ACID 180-1,611 FR USA
 OLEIC-ACID 193,545-202,400 SD HHB
 WOI
 PALMITIC-ACID 320-2,865 FR USA
 PALMITIC-ACID 28,791-30,107 SD HHB
 WOI
 PALMITOLEIC-ACID 200-1,790 FR USA
 PANTOTHENIC-ACID 2-19 FR USA
 PAPAIN FR WOI
 PAPAIN 53,000 LX WOI
 PENTADECANE FR JAF38:1062
 PENTAN-2,4-DIONE FR JAF38:1062
 ALPHA-PHELLANDRENE FR JAF38:1062
 BETA-PHELLANDRENE FR JAF38:1062
 PHENYLACETONITRILE FR JAF38:1062
 PHENYLALANINE 90-806 FR USA
 PHOSPHORUS 45-1,260 FR PED USA
 WOI
 PHOSPHORUS 1,420-6,311 LF CRC
 PHYTOENE FR HHB
 PHYTOFLUENE FR HHB
 POTASSIUM 2,294-25,469 FR USA
 POTASSIUM 6,520-28,978 LF CRC
 PROLINE 100-895 FR USA

PROPYL-ALCOHOL FR HHB
 PROP-2-YL-BUTYRATE FR JAF38:1062
 PROTEIN 5,000-57,370 FR USA WOI
 PROTEIN 70,000-326,000 LF CRC
 PROTEIN 243,000 SD WOI
 PSEUDOCARPAINE 100 LF HHB
 PUFA 310-2,775 FR USA
 RESIN 28,000 LX WOI
 RIBOFLAVIN 0.3-3 FR USA
 RIBOFLAVIN 5-21 LF CRC
 SERINE 150-1,343 FR USA
 SFA 430-3,850 FR USA
 SODIUM 26-554 FR PED USA JFS51:523
 SODIUM 160-711 LF CRC
 STEARIC-ACID 20-179 FR USA
 STEARIC-ACID 12,650-13,282 SD HHB
 WOI
 SUCROSE FR WOI
 SULFUR 300-900 FR JFS51:523
 TANNINS 5,000-6,000 LF EB10:259
 TARTARIC-ACID FR WOI
 ALPHA-TERPINENE FR JAF38:1062
 GAMMA-TERPINENE FR JAF38:1062
 4-TERPINEOL FR JAF38:1062
 TERPINOLENE FR JAF38:1062
 THIAMIN 0.2-2.6 FR USA
 THIAMIN 1-4 LF CRC
 THREONINE 110-985 FR USA
 TRIACETIN FR JAF38:1062
 TRYPTOPHAN 80-716 FR USA
 TYROSINE 50-448 FR USA
 VALINE 100-895 FR USA
 VIOLAXANTHIN FR WOI
 VIT-B6 0.2-1.7 FR USA
 WATER 697,000-703,000 LF EB10:259
 WATER 865,000-918,300 FR PED USA
 WOI
 WATER 750,000 LX WOI
 ZEAXANTHIN FR WOI
 ZINC 1.8-5.4 FR JFS51:523

CARTHAMUS TINCTORIUS L.

“SAFFLOWER”

ALLOAROMADENDRENE 0.01 BD
 JAF38:1245
 ALUMINUM 84 FL PED
 ARACHIDIC-ACID 1,000-3,130 SD WOI
 ARSENIC 0.48 FL CAL
 ASCORBIC-ACID 0 SD CRC
 ASH 38,000 FL PED
 ASH 15,000-122,000 PL CRC
 ASH 40,000-45,000 SD CRC
 BEHENIC-ACID SD HHB

- BENZALDEHYDE 0.1 BD JAF38:1245
 BENZALDEHYDE 0.04 LF JAF38:1245
 BENZENE 0.13-0.25 FL JAF38:1245
 BENZOTHAZOLE 0.01 FL JAF38:1245
 BENZOTHAZOLE 0.03 LF JAF38:1245
 DELTA-CADINENE 0.63-0.84 FL
 JAF38:1245
 DELTA-CADINENE 0.12 LF JAF38:1245
 CALCIUM 4,430-7,700 FL CAL SMO
 PED
 CALCIUM 17,000 PL CRC
 CALCIUM 1,260-1,324 SD CRC
 CARBOHYDRATES 692,000-892,000 PL
 CRC
 CARBOHYDRATES 124,000-530,000 SD
 CRC
 CARTHAMIN 3,000-6,000 FL WOI
 CARTHAMONE FL CCO
 CARYOPHYLLENE 43-50 FL JAF38:1245
 CARYOPHYLLENE 27-28 LF JAF38:1245
 CARYOPHYLLENE-EPOXIDE 2.4-4.5 FL
 JAF38:1245
 CARYOPHYLLENE-EPOXIDE 1.14 LF
 JAF38:1245
 ALPHA-CEDRENE 0.24-1.4 FL
 JAF38:1245
 CHROMIUM 31 FL PED
 COBALT 26 FL PED
 ALPHA-COPAENE 0.17-0.22 FL
 JAF38:1245
 ALPHA-COPAENE 0.05 LF JAF38:1245
 COPPER 20-26 FL CAL SMO
 BETA-CYCLOCITRAL 0.03 FL
 JAF38:1245
 BETA-CYCLOCITRAL 0.05 LF
 JAF38:1245
 CYCLOSATIVENE 0.09 BD JAF38:1245
 P-CYMENE 0.01 BD JAF38:1245
 P-CYMENE 0.03 LF JAF38:1245
 (E,E)-2,4-DECADIENAL 0.15 FL
 JAF38:1245
 (E,Z)-2,8-DECADIENE-4,6-DIYNE-1-YL-3-
 METHYLBUTYRATE 1.09 FL
 JAF38:1245
 DECA-4,6-DIYN-1-OL PL JSG
 DECA-4,6-DIYN-1-YL-3-
 METHYLBUTYRATE 0.7-12.2 FL
 JAF38:1245
 DECA-4,6-DIYN-1-YL-3-
 METHYLBUTYRATE 0.59 LF
 JAF38:1245
 DECANAL 0.03 FL JAF38:1245
 DECANAL 0.03 LF JAF38:1245
 DECANE 0.01 BD JAF38:1245
 (Z)-8-DECENE-4,6-DIYNE-1-YL-3-
 METHYLBUTYRATE 0.9-19.7 FL
 JAF38:1245
 (Z)-8-DECENE-4,6-DIYNE-1-YL-3-
 METHYLBUTYRATE 0.07 LF
 JAF38:1245
 DIHYDROACTINIDIOLIDE 0.02-0.1 FL
 JAF38:1245
 ETHYL-ACETATE 0.04-0.14 FL
 JAF38:1245
 ETHYLBENZENE 0.4-0.5 FL JAF38:1245
 (E)-BETA-FARNESENE 0.05-0.19 FL
 JAF38:1245
 (E)-BETA-FARNESENE 0.04 LF
 JAF38:1245
 FAT 63,000 FL PED
 FAT 16,000-51,000 PL CRC
 FAT 200,000-626,000 SD CRC WOI
 FIBER 93,000 FL PED
 FIBER 109,000-582,000 PL CRC
 FIBER 251,000-582,000 SD CRC
 GERMACRENE-D 0.04 LF JAF38:1245
 ALPHA-GURJUNENE 0.04 BD
 JAF38:1245
 (Z,Z)-1,8,11-HEPTADECATRIENE 0.69-
 1.42 FL JAF38:1245
 (Z,Z)-1,8,11-HEPTADECATRIENE 1.74 LF
 JAF38:1245
 (Z,Z,Z)-1,8,11,14-HEPTADECATETRAENE
 1.54-7.8 FL JAF38:1245
 (Z,Z,Z)-1,8,11,14-HEPTADECATETRAENE
 3.22 FL JAF38:1245
 1-HEPTADECENE 0.31-0.37 FL
 JAF38:1245
 1-HEPTADECENE 0.51 FL JAF38:1245
 1-HEPTADECENE SP JAF38:1245
 (E)-2-HEPTENAL 0.02 BD JAF38:1245
 (E)-2-HEPTENAL 0.04 LF JAF38:1245
 (Z)-2-HEPTENAL 0.03 BD JAF38:1245
 1-HEXADECENE 0.05-0.11 FL JAF38:1245
 1-HEXADECENE 0.22 LF JAF38:1245
 HEXANAL 0.06 BD JAF38:1245
 HEXANOL 0.27 BD JAF38:1245
 HEXANOL 1.06 LF JAF38:1245
 2-HEXANOL 0.12 FL JAF38:1245
 3-HEXANOL 0.1 FL JAF38:1245
 (E)-2-HEXENAL 0.5-0.6 FL JAF38:1245
 (E)-2-HEXENAL 1.67 LF JAF38:1245
 (E)-2-HEXENOL 0.22 BD JAF38:1245
 (E)-2-HEXENOL 0.73 LF JAF38:1245
 (Z)-3-HEXENOL 0.57 BD JAF38:1245
 (Z)-3-HEXENOL 1.41 LF JAF38:1245
 (Z)-3-HEXENYL-BENZOATE 0.04 BD
 JAF38:1245

(Z)-3-HEXENYL-BENZOATE 0.05 LF
 JAF38:1245
 (Z)-3-HEXENYL-BUTYRATE 0.01 LF
 JAF38:1245
 HEXYL-3-METHYLBUTYRATE 0.01 BD
 JAF38:1245
 HUMULENE 1.6-2.0 FL JAF38:1245
 HUMULENE 1.13 LF JAF38:1245
 2-HYDROXYARCTIIN FL 411/
 BETA-IONONE 0.07-0.88 FL JAF38:1245
 BETA-IONONE 0.09 LF JAF38:1245
 IRON 81-2,200 FL CAL PED SMO
 IRON 97-102 SD CRC
 ISOCARTHAMIN FL WOI
 KAEMPFEROL-GLYCOSIDE FL HHB
 KILOCALORIES 4,820-6,470 SD CRC
 LAURIC-ACID SD WOI
 LIGNOCERIC-ACID SD WOI
 LIMONENE 0.01 BD JAF38:1245
 LIMONENE 0.01 LF JAF38:1245
 LINOLEIC-ACID 122,000-481,394 SD
 HHB WOI
 LINOLENIC-ACID 5,200-16,276 SD
 HHB
 LUTEOLIN-7-BETA-D-GLUCOSIDE LF
 CCO
 MAGNESIUM 1,130-2,260 FL CAL PED
 SMO
 MANGANESE 31-53 FL CAL PED SMO
 MATAIRESINOL-4-O-BETA-
 GLUCOPYRANOSIDE SD CCO
 MATAIRESINOSIDE SD CCO
 MERCURY 0.02 FL CAL(E)-2-METHYL-
 2-BUTENAL 0.05 BD JAF38:1245
 2-METHYLBUTYRIC-ACID 0.11 FL
 JAF38:1245
 3-METHYLBUTYRIC-ACID 1.2 FL
 JAF38:1245
 METHYLCINNAMATE 0.08 FL
 JAF38:1245
 2-METHYLPENT-2-ENAL 0.2 BD
 JAF38:1245
 2-METHYLPROPANOL 0.07 BD
 JAF38:1245
 MUCILAGE FL CCO
 ALPHA-MUUROLENE 0.09 BD
 JAF38:1245
 GAMMA-MUUROLENE 0.06 BD
 JAF38:1245
 MYRISTIC-ACID 3,000-9,390 SD WOI
 NEOCARTHAMIN FL HHB
 NIACIN 5.0-5.3 SD CRC
 NONANAL 0.03-0.07 FL JAF38:1245
 NONANAL 0.13 LF JAF38:1245
 OLEIC-ACID 11,000-206,580 SD HHB
 WOI
 PALMITIC-ACID 6,000-18,780 SD WOI
 1-PENTADECENE 9-110 FL JAF38:1245
 1-PENTADECENE 138 LF JAF38:1245
 PENTANAL 0.04 LF JAF38:1245
 PENTANOL 0.13 BD JAF38:1245
 (E)-2-PENTENAL 0.07 BD JAF38:1245
 (E)-2-PENTENOL 0.01 BD JAF38:1245
 (E)-2-PENTENOL 0.1 LF JAF38:1245
 (Z)-2-PENTENOL 0.23 BD JAF38:1245
 PENT-1-EN-3-OL 0.07-0.31 FL JAF38:1245
 PENT-3-EN-2-ONE 0.28 BD JAF38:1245
 ALPHA-PHELLANDRENE 0.01 BD
 JAF38:1245
 ALPHA-PHELLANDRENE 0.01 LF
 JAF38:1245
 PHENOL 0.04 BD JAF38:1245
 PHENYLACETALDEHYDE 1.22 FL
 JAF38:1245
 PHENYLACETALDEHYDE 0.07 LF
 JAF38:1245
 PHOSPHORUS 2,370 FL PED
 PHOSPHORUS 3,400 PL CRC
 PHOSPHORUS 3,100-3,526 SD CRC
 POTASSIUM 14,000-22,400 FL CAL PED
 SMO
 PROTEIN 148,000 FL PED
 PROTEIN 122,000-170,000 PL
 PROTEIN 126,000-201,000 SD CRC
 RIBOFLAVIN 1.-2 SD CRC
 SAFFLOWER-YELLOW 200,000-300,000
 FL CCO
 SAFYNOL PL JSG
 SELENIUM 20 FL PED
 BETA-SELINENE 0.14-0.29 FL
 JAF38:1245
 BETA-SELINENE 0.11 LF JAF38:1245
 SEROTOBENINE PL JSG
 SILICON 47 FL PED
 SODIUM 2,320 FL PED
 STEARIC-ACID 2,000-6,260 SD WOI
 TERPINEN-4-OL 0.01-0.1 FL JAF38:1245
 TETRACHELOSIDE FL 411/
 TETRADECENE 0.08-3.10 FL BD
 JAF38:1245
 TETRADECENE 3.66 LF JAF38:1245
 THIAMIN 5.9-6.2 SD CRC
 TIN 10 FL PED
 ALPHA-TOCOPHEROL 449 OI TOT
 GAMMA-TOCOPHEROL 26 OI TOT
 TRACHELOSIDE SD CCO
 (E,E)-3,11-TRIDECADIENE-5,7,9-TRIYNE-
 1,2-DIOL SP JAF38:1245 (FUNGICIDE)

- (E,Z,E)-1,3,5,11-TRIDECATETRAENE-7,9-DIYNE 2-28 FL JAF38:1245
 (E,Z,E)-1,3,5,11-TRIDECATETRAENE-7,9-DIYNE 3 LF JAF38:1245
 TRIDECANE 0.02 BD JAF38:1245
 TRIDECA-1,3,5-TRIENE-7,9,11-TRIYNE SD CCO
 3E,11E-TRIDECA-1,3,11-TRIENE-5,7,9-TRIYNE FL
 3Z,11E-TRIDECA-1,3,11-TRIENE-5,7,9-TRIYNE FL
 3E-TRIDECA-1,3-DIENE-5,7,9,11-TETRAYNE SP CCO
 3E,11E-TRIDECA-1,3,11-TRIENE-5,7,9-TRIYNE SP CCO
 3,5,11E-TRIDECA-1,3,5,11-TETRAENE-7,9-DIYNE SP CCO
 3E,5E,11E-TRIDECA-1,3,5,11-TETRAENE-7,9-DIYNE SP CCO
 3E,5Z,11E-TRIDECA-1,3,5,11-TETRAENE-7,9-DIYNE SP CCO
 3Z,11Z-TRIDECA-1,3,11-TRIENE-5,7,9-TRIYNR SP CCO
 3Z,11Z-TRIDECA-1,3,11-TRIENE-5,7,9-TRIYNE SP CCO
 (Z,Z)-3,11-TRIDECATRIENE-5,7,9-TRIYNE 0.82 FL JAF38:1245
 11E-TRIDECA-1,11-DIENE-3,5,7,9-TETRAYNE SP CCO
 11Z-TRIDECA-1,11-DIENE-3,5,7,9-TETRAYNE SP CCO
 1-TRIDECENE 0.16 BD JAF38:1245
 1-TRIDECENE 0.19 LF JAF38:1245
 1-TRIDECENE-3,5,7,9,11-PENTAYNE 0.39-0.79 FL JAF38:1245
 (E)-11-TRIDECENE-3,5,7,9-TETRAYNE-1,2-DIOL SP JAF38:1245 5.9-6.2 SD CRC
 1,2,3-TRIMETHOXY-5-METHYL-BENZENE 1.12 FL JAF38:1245
 UBIQUINONE-9 PL JSG
 VERBENONE 0.16 FL JAF38:1245
 WATER 901,000 FL PED
 WATER 48,000-50,000 SD CRC
 M-XYLENE 0.12 BD JAF38:1245
 O-XYLENE 0.5-0.11 FL JAF38:1245
 P-XYLENE 0.5-0.24 FL JAF38:1245
 ZINC TR-32 FL CAL PED SMO
 CADINENE 3,720 PL BML
 CALCIUM 6,426-8,160 FR CRC USA
 CALCIUM-OXALATE FR 411/
 CAMPHENE 1-900 FR BML
 CAMPHENE 30 PL BML
 CAPRIC-ACID 100-110 FR USA
 CARBOHYDRATES 499,000-554,000 FR CRC USA
 DELTA-3-CARENE 90-180 FR BML
 DELTA-3-CARENE 100 PL BML
 BETA-CAROTENE 2 FR CRC USA
 CARVACROL
 CIS-CARVEOL 21-42 SD BML
 TRANS-CARVEOL 105-210 SD BML
 CARVEOL 120-3,240 SD BML
 CARVEOL 430 PLBML
 CARVONE 9,000-44,310 FR BML 411/
 CARVONE 3,120 PL BML
 CARVYL-ACETATE 45-90 SD BML
 CARVYL-ACETATE 55 PL BML
 CHROMIUM 15.5 FR ABS 5/
 COBALT 1 FR ABS 5/
 COPPER 9-13.8 FR ABS USA
 DIACETYL FR GEO
 DIHYDROCARVEOL 360-720 FR BML
 DIHYDROCARVEOL 950 PL BML
 DIHYDROCARVONE 240-1,500 FR BML
 DIHYDROCARVONE 230 PL BML
 DIHYDROCARVYL-ACETATE 45-90 FR BML
 DIHYDROCARVYL-ACETATE 55 PPL BML
 D-DIHYDROPINOL SD HHB
 EO 30,000-70,000 FR MPI
 EO 10,000 PL BML
 FALCARINDION RT CCO
 FALCARINOLONE RT CCO
 FALCARINONE JAD
 FAT 127,000-176,826 FR CRC USA
 FIBER 112,730-155,640 FR CRC USA
 FURFURAL FR GEO
 IRON 123-286 FR CRC USA ABS 5/
 ISODIHYDROCARVEOL FR BML
 ISODIHYDROCARVONE FR BML
 LAURIC-ACID 100-110 FR USA
 LIMONENE 7,860-30,180 FR BML
 LIMONENE 420 PL BML
 LINALOOL 48-96 FR BML
 LINOLEIC-ACID 20,300-46,714 FR USA
 ALPHA-LINOLENIC-ACID 1,500-1,664 FR USA
 MAGNESIUM 2,580-2,863 FR CRC USA
 MANGANESE 13-34 FR ABS USA
 CIS-P-MENTH-8-EN-1-OL

CARUM CARVI L.**"CARAWAY"**

- ACETALDEHYDE FR GEO
 ASH 56,460-67,620 FR CRC USA

METHANOL FR GEO
 MYRCENE 180-1,560 FR BML
 MYRCENE 150 PL BML
 MYRISTIC-ACID 400-444 FR USA
 MYRISTICIN 60-420 FR BML
 MYRISTICIN 120 PL BML
 NEODIHYDROCARVEOL FR BML
 NEOISODIHYDROCARVEOL FR BML
 NIACIN 21-56 FR USA
 NICKEL 7 FR ABS 5/
 N-NONANAL 6-12 FR BML
 N-OCTANAL 24-48 FR BML
 OLEIC-ACID 54,400-95,648 FR USA
 PALMITIC-ACID 2,000-6,658 FR USA
 PALMITOLEIC-ACID 900-999 FR USA
 D-PERILLALDEHYDE FR HHB
 PERILLYL-ALCOHOL 160 PL BML
 PETROSELINIC-ACID 33,020 HHB USA
 ALPHA-PHELLANDRENE 3-6 FR BML
 PHOSPHORUS 5,680-6,302 FR CRC USA
 PHYTOSTEROLS 760 FR USA
 ALPHA-PINENE 42-540 FR BML
 ALPHA-PINENE 20 PL BML
 BETA-PINENE 270-600 FR BML
 BETA-PINENE 20 PL BML
 POTASSIUM 12,902-15,665 FR USA
 PROTEIN 190,521-220,000 FR USA
 QUERCETIN FR 411/
 RIBOFLAVIN 3-4 FR USA
 SABINENE 30-60 FR BML
 SODIUM 149-212 FR BML
 STARCH 45,000 FR HHB
 STEARIC-ACID 1,100-1,221
 SUGARS 30,000 FR HHB
 TANNIN
 TERPINEN-4-OL 120 PL BML
 ALPHA-TERPINENE 6-12 SD BML
 GAMMA-TERPINENE 12-14,160 FR BML
 GAMMA-TERPINENE 270 PL BML
 TERPINOLENE FR BML
 THIAMIN 3-4 FR USA
 THUJONE FR 411/
 TRANS-DIHYDROCARVONE 177-354 FR BML
 TRICYCLENONE FR BML
 ZINC 47-61 FR USA ABS 5/

5/ Abs=Pak. J.Sci.Ind.Res. 28: 234. 1985

CARYA GLABRA (MILLER)
SWEET

“PIGNET HICKORY”

ALUMINUM 40-7,700 SH USG
 ASH 20,000-110,000 SH USG
 BARIUM 140-2,200 SH USG
 BORON 0-77 SH USG
 CALCIUM 3,800-40,700 SH USG
 CHROMIUM 0.04-5.5 SH USG
 COBALT 0-16.5 SH USG
 COPPER 0.9-55 SH USG
 IODINE 2-5 SH USG
 IRON 10-429 SH USG
 LANTHANUM 1-220 SH USG
 LEAD 2-103 SH USG
 LITHIUM 0.009-6.6 SH USG
 MAGNESIUM 144-24,200 SH USG
 MANGANESE 38-3,300 SH USG
 MOLYBDENUM 0-33 SH USG
 NICKEL 0.4-55 SH USG
 PHOSPHORUS 8-2,640 SH USG
 POTASSIUM 540-18,700 SH USG 1/
 RUBIDIUM 1.8-17 SH USG 2/
 SILICON 100-4,180 SH USG
 SILVER 0-0.77 SH USG
 SODIUM 12-297 SH USG
 STRONTIUM 20-1,100 SH USG
 TITANIUM 0.4-110 SH USG
 VANADIUM 0.1-1.1 SH USG
 WATER
 YTTERBIUM 0.04-0.77 SH USG
 YTTRIUM 0.4-55 SH USG
 ZINC 4-1,100 SH USG

2/Assumes ash =10% ZMB

CARYA ILLINOENSIS
(WANGENH.) K. KOCH

“PECAN”

ALUMINUM 11 SD FUR 1/
 ANTIMONY 0.2 SD FUR
 ARACHIDIC-ACID LF HHB
 ARSENIC 0.02 SD FUR
 ASCORBIC-ACID 20-21 SD CRC
 ASH 16,000-17,000 SD CRC
 AZALEATIN PL HHB
 AZALEATIN-3-ARABINOSIDE PL JSG
 AZALEATIN-3-RUTINOSIDE PL JSG
 BARIUM 14 SD FUR
 BORON 6.5-7.6 SD BOB FUR
 BROMINE 1.5 SD FUR

CADMIUM 0.03 SD FUR
 CALCIUM 618-763 SD CRC FUR
 CAPROLIC-ACID LF HHB
 CARBOHYDRATES 130,000-191,637 SD
 CRC USA
 BETA-CAROTENE 0.13-0.83 SD CRC
 USA
 CARYATIN PL HHB
 CARYATIN-3'-GLUCOSIDE PL JSG
 CATECHIN PL HHB
 CESIUM 0.3 SD FUR
 CHLORINE 46 SD FUR
 CHROMIUM 0.3 SD FUR
 COBALT 0.4 SD FUR
 COPPER 15 SD FUR
 3,4-DIHYDROXYBENZOIC-ACID PL
 HHB
 EUROPIUM 0.02 SD FUR
 FAT 712,000-753,000 SD CRC
 FIBER 22,000-24,000 SD CRC
 FLUORINE 1.6 SD FUR
 GOLD 0.001 SD FUR
 HAFNIUM 0.1 SD FUR
 IRON 24-73 SD CRC FUR
 M-INOSITOL PL HHB
 IODINE 0.1 SD FUR
 KILOCALORIES 6,670-7,180 SD CRC
 USA
 LANTHANUM 0.02 SD FUR
 LAURIC-ACID LF HHB
 LEAD 0.3 SD FUR
 LINOLEIC-ACID LF HHB
 LINOLENIC-ACID LF HHB
 LUTETIUM 0.01 SD FUR
 MAGNESIUM 980 SD FUR
 MANGANESE 30 SD FUR
 MERCURY 0.1 SD FUR
 MOLYBDENUM
 MYRISTIC-ACID LF HHB
 NIACIN 8.9-9.3 SD CRC USA
 NICKEL 1.6 SD FUR
 OLEIC-ACID LF HHB
 PALMITIC-ACID LF HHB
 PANTOTHENIC-ACID 17-18 SD USA
 PHLOROGLUCIN PL HHB
 PHOSPHORUS 2,890-3,340 SD CRC
 PHYTOSTEROLS LF HHB
 POTASSIUM 3,971-6,242 SD CRC FUR
 PROTEIN 92,000-97,000 SD CRC
 QUERCETIN-3,5-DIMETHYLETHER PL
 HHB
 QUERCETIN-3-GLUCOSIDE PL JSG
 QUERCETIN-5-METHYLETHER PL
 HHB

RIBOFLAVIN 1.1-1.3 SD CRC
 RUBIDIUM 22 SD FUR
 SAMARIUM 0.06 SD FUR
 SCANDIUM 0.004 SD FUR
 SELENIUM 0.02 SD FUR
 SILICON 200 SD FUR
 SODIUM 0-31 SD CRC FUR
 STEARIC-ACID LF HHB
 STRONTIUM 2.5 SD FUR
 SULFUR 800 SD FUR
 TANTALUM 0.1 SD FUR
 THIAMIN 7.2-8.9 SD CRC
 THORIUM 0.1 SD FUR
 TIN 1.8 SD FUR
 TITANIUM 2.8 SD FUR
 TUNGSTEN 0.05 SD FUR
 VANADIUM 0.01 SD FUR
 VIT-B6 1.8-2 SD USA
 WATER 30,000-50,540 SD CRC USA
 YTTERBIUM 0.03 SD FUR
 ZINC 56 SD FUR 1/

1/ Fur=A.K.Furr et al, 1979.

CARYA OVATA (MILL.) K. KOCH
“SHAGBARK HICKORY”

ALUMINUM 2.6 SD FUR 2/
 ANTIMONY 0.1 SD FUR
 ARSENIC 0.02 SD FUR
 ASH 25,000-90,000 SH USG
 BARIUM 0.1 SD FUR
 BARIUM 12-1,800 SH USG
 BORON 8.5 SD FUR
 BORON 2-63 SH USG
 BROMINE 1.8 SD FUR
 CADMIUM 0.08 SD FUR
 CADMIUM 0-3 SH USG
 CALCIUM 1,095 SD FUR
 CALCIUM 5,250-33,300 SH USG
 CERIUM 4-63 SH USG
 CESIUM 0.1 SD FUR
 CHLORINE 71 SD FUR
 CHROMIUM 0.05-2.7 SH USG
 CHROMIUM 1.6 SD FUR
 COBALT 0.2 SD FUR
 COBALT 0-13.5 SH USG
 COPPER 7.8 SD FUR
 COPPER 1.25-45 SH USG
 EUROPIUM 0.02 SD FUR
 FLUORINE 1.3 SD FUR
 FLUORINE 0-0.009 SH USG
 GOLD 0.001 SD FUR

HAFNIUM 0.1 SD FUR
 IODINE 0.1 SD FUR
 IODINE 2-5 SH USG
 IRON 32 SD FUR
 IRON 12.5-45 SH USG
 LANTHANUM 0.03 SD FUR
 LANTHANUM 1.7-90 SH USG
 LEAD 0.4 SD FUR
 LEAD 0.7-46 SH USG
 LECITHIN 5,000 SD OIL HHB
 LITHIUM 0.115-11.7 SH USG
 LUTETIUM 0.01 SD FUR
 MAGNESIUM 900 SD FUR
 MAGNESIUM 125-21,600 SH USG
 MANGANESE 58 SD FUR
 MANGANESE 37-2,700 SH USG
 MOLYBDENUM 0.1 SD FUR
 MOLYBDENUM 0-18 SH USG
 NEODYMIUM 0-13.5 SH USG
 NICKEL 9.8 SD FUR
 NICKEL 0.25-23 SH USG
 PHOSPHORUS 110-1,620 SH USG
 PHYTOSTEROLS 3,000 SD OIL
 HHB
 POTASSIUM 5,361 SD FUR
 POTASSIUM 550-14,400 SH USG
 RUBIDIUM 4 SD FUR
 RUBIDIUM 18-192 SH USG 1/
 SAMARIUM 0.05 SD FUR
 SCANDIUM 0.004 SD FUR
 SELENIUM 0.02 SD FUR
 SILICON 1,180 SD FUR
 SILICON 172-2,250 SH USG
 SODIUM 2.8 SD FUR
 SODIUM 5-270 SH USG
 STRONTIUM 2.5 SD FUR
 STRONTIUM 12-900 SH USG
 SULFUR 2,180 SD FUR
 TANTALUM 0.04 SD FUR
 THORIUM 0.3 SD FUR
 TIN 3.2 SD FUR
 TITANIUM 4.3 SD FUR
 TITANIUM 0.7-45 SH USG
 TUNGSTEN 0.04 SD FUR
 VANADIUM 0.01 SD FUR
 YTTERBIUM 0.1 SD FUR
 YTTERBIUM 0.05-0.9 SH USG
 YTTRIUM 0.5-13.5 SH USG
 ZINC 46 SD FUR
 ZINC 7-342 SH USG
 ZIRCONIUM 0.5-2.7 SH USG

1/ Assumes ash = 10% SH 2/Fur=Furr et al,1979.

CASSIA GRANDIS L.f.

“PINK SHOWER”

ALOE-EMODIN PL JSG
 KAEMPFEROL-3-O-BETA-D-
 MANNOPYRANOSYL
 (1->4)O-BETA-D-GLUCOPYRANOSIDE
 SD RAA

CASSIA MARILANDICA L.

“WILD SENNA”

ANTHRAQUINONES LF HHB
 CHRYSOPHANOL 1 LF
 CHRYSOPHANOL-BETA-GLUCOSIDE
 2-EMODIN-HETEROSIDE
 EO
 PHYSCION
 PHYSCION-BETA-HETEROSIDE

CASSIA TORA L.

“SICKLE SENNA”

ALOE-EMODIN SD CCO
 ANTHRONE SD HHB
 ASH 99,000 SP CRC
 AURANTIOBTUSIN SD CCO
 CALCIUM 11,700 SD CAL
 CALCIUM 28,100 SP CRC
 CARBOHYDRATES 726,000 SP CRC
 CAROTIN SD CCO
 CHRYSO-OBTUSIN SD CCO
 CHRYSOPHANIC-ACID-9-ANTHRONE
 SD CCO
 CHRYSOPHANOL SD CCO
 CHRYSOPHANOL-1-BETA-
 GENTIOBIOSIDE SD CCO
 COPPER 8-10 SD CAL
 EMODIN SD CCO
 FAT 44,000 PL CRC
 FAT 33,000-74,000 SD CRC
 FIBER 199,000 SP CRC
 GLUCOSE PL HHB
 IRON 50 SD CAL
 KAEMPFEROL-3-SOPHOROSIDE LF
 HHB
 LIGNOCERIC-ACID 3,300-7,400 SD HHB
 LINOLENIC-ACID 11,913-26,714 SD HHB
 MAGNESIUM 3,180 SD CAL
 MANGANESE 24 SD CAL
 MANNITOL PL HHB
 MYRICYLALCOHOL PL HHB
 NOR-RUBROFUSARIN SD CCO

OBTUSIFOLIN SD CCO
 OBTUSIN SD CCO
 OLEIC-ACID 13,068-29,304 SD HHB
 PALMITIC-ACID 2,211-4,958 SD HHB
 PHOSPHORUS 5,700 SP CRC
 PHYSCION SD CCO
 POTASSIUM 12,700 SD CAL
 PROTEIN 182,000-360,000 SD CRC
 PROTEIN 132,000 SP CRC
 RHEIN SD CCO
 RUBROFUSARIN SD CCO
 RUBROFUSARIN-GENTIOBIOSIDE SD CCO
 RUBROFUSARIN-6-BETA-GENTIOBIOSIDE SD CCO
 SITOSTEROL SD WO1
 SODIUM 59 SD CAL
 STEARIC-ACID 2,508-5,624 SD HHB
 TORACHRYSONE SD CCO
 TORALACTONE SD CCO
 ZINC 31 SD CAL

CASTANEA DENTATA
(MARSHALL) BORKH.

“AMERICAN CHESTNUT”

ALANINE 2,469-4,395 SD 1/
 ARGININE 3,808-6,778 SD 1/
 ASH 15,600-28,480 SD 1/
 ASPARTIC-ACID 8,071-14,362 SD 1/
 CALCIUM 240-427 SD 1/
 CARBOHYDRATES 485,700-864,546 SD 1/
 COPPER 4-7 SD 1/
 CYSTINE 1,075-1,913 SD 1/
 FAT 12,600-24,208 SD 1/
 FIBER 19,000-34,176 SD 1/
 GLUTAMIC-ACID 6,204-11,043 SD 1/
 GLYCINE 2,268-4,038 SD 1/
 HISTIDINE 1,230-2,158 SD 1/
 IRON 12-29 SD 1/
 ISOLEUCINE 1,931-3,438 SD 1/
 LEUCINE 2,987-5,335 SD 1/
 LYSINE 2,687-4,784 SD 1/
 MAGNESIUM 790-1,406 SD 1/
 MANGANESE 19-44 SD 1/
 METHIONINE 893-1,589 SD 1/
 PHENYLALANINE 2,104-3,746 SD 1/
 PHOSPHORUS 960-1,709 SD 1/
 POTASSIUM 4,720-7,541 SD 1/
 PROLINE 2,141-3,811 SD 1/
 PROTEIN 47,700-87,042 SD 1/
 SERINE 2,077-3,697 SD 1/

SODIUM 30-53 SD 1/
 TANNINS 80,000-90,000 LF 411/
 THREONINE 1,904-3,389 SD 1/
 TRYPTOPHAN 537-957 SD 1/
 TYROSINE 1,585-2,822 SD 1/
 VALINE 2,596-4,622 SD 1/
 ZINC 10-24 SD 1/

1/ Nutr. data mostly McCarthy & Meredith. 1988. Econ. Bot. 42(1): 29-36. Leaf and bark characters may parallel those reported for *Castanea sativa*.

***CASTANEA MOLLISIMA* BLUME**

“CHINESE CHESTNUT”

ALANINE 2,012-3,581 SD 1/
 ARGININE 4,411-7,852 SD 1/
 ASH 16,700-29,726 SD 1/
 ASPARTIC-ACID 8,522-15,169 SD 1/
 CALCIUM 160-356 SD 1/
 CARBOHYDRATES 490,700-873,446 SD 1/
 COPPER 4-6 SD 1/
 CYSTINE 1,101-1,960 SD 1/
 FAT 10,600-20,648 SD 1/
 FIBER 16,000-29,904 SD 1/
 GLUTAMIC-ACID 5,393-9,600 SD 1/
 GLYCINE 1,837-3,271 SD 1/
 HISTIDINE 1,267-2,256 SD 1/
 IRON 14-25 SD 1/
 ISOLEUCINE 1,624-2,890 SD 1/
 LEUCINE 2,701-4,807 SD 1/
 LYSINE 2,313-4,116 SD 1/
 MAGNESIUM 820-1,531 SD 1/
 MANGANESE 12-36 SD 1/
 METHIONINE 1,014-1,804 SD 1/
 PHENYLALANINE 2,178-3,879 SD 1/
 PHOSPHORUS 940-1,774 SD 1/
 POTASSIUM 4,320-8,224 SD 1/
 PROLINE 1,632-2,904 SD 1/
 PROTEIN 41,900-74,938 SD 1/
 SERINE 1,820-3,255 SD 1/
 SODIUM 30-53 SD 1/
 THREONINE 1,806-3,214 SD 1/
 TRYPTOPHAN 491-874 SD 1/
 TYROSINE 1,536-2,735 SD 1/
 VALINE 2,233-3,976 SD 1/
 ZINC 8-17 SD 1/

1/McCarthy & Meredith. 1988. Econ. Bot. 42(1):

CASTANEA SATIVA MILLER**"EUROPEAN CHESTNUT"**

ALANINE 1,380-3,036 SD 1/
 ARGININE 1,451-3,192 SD 1/
 ASH 44,000 LF WOI
 ASH 12,300-27,060 SD 1/
 ASPARTIC-ACID 3,381-7,438 SD 1/
 CAFFEIC-ACID LF HHB
 CALCIUM 220-528 SD 1/
 CARBOHYDRATES 402,800-886,160
 SD 1/
 CASTALAGIN HHB
 CASTALIN HHB
 CELLULOSE 21,000 SD WOI
 COPPER 2-5 SD 1/
 P-COUMARIC-ACID
 CYSTINE 628-1,382 SD 1/
 DEHYDRODIGALLIC-ACID 5,000 BR
 HHB
 ELLAGIC-ACID LF HHB
 FAT 81,000 LF WOI
 FAT 16,000-36,520 SD 1/
 FIBER 185,000 LF WOI
 FIBER 13,200-30,800 SD 1/
 GALLIC-ACID LF HHB
 GLUTAMIC-ACID 2,558-5,628 SD 1/
 GLYCINE 1,070-2,353 SD 1/
 HAMAMELITANNIN BK HHB
 HAMAMELOSE LF HHB
 HISTIDINE 554-1,218 SD 1/
 IRON 7-16 SD 1/
 ISOLEUCINE 782-1,720 SD 1/
 KAEMPFEROL LF HHB
 LEUCINE 1,144-2,518 SD 1/
 LYSINE 1,189-2,617 SD 1/
 MAGNESIUM 320-704 SD 1/
 MANGANESE 5-13 SD 1/
 METHIONINE 468-1,028 SD 1/
 PECTIN LF HHB
 PHENYLALANINE 842-1,851 SD 1/
 PHOSPHATASE LF HHB
 PHOSPHORUS 490-1,122 SD 1/
 PLASTOQUINONES LF 411/
 POTASSIUM 3,630-8,646 SD 1/
 PROLINE 1,010-2,222 SD 1/
 PROTEIN 80,000 LF WOI
 PROTEIN 19,800-109,000 SD 1/ HHB WOI
 QUERCETIN LF BK WD HHB
 SACCHAROSE 220,000-340,000 SD HHB
 SERINE 972-2,139 SD 1/
 SODIUM 30-66 SD 1/
 STARCH 450,000-580,000 SD HHB

SUCROSE 216,000 SD WOI
 TANNIN 20,000-28,000 SD HHB
 TANNIN 40,000-120,000 BK HHB
 TANNIN 70,000-120,000 BK HHB
 TANNIN 90,000 LF HHB
 THREONINE 729-1,604 SD 1/
 TRYPTOPHAN 221-485 SD 1/
 TYROSINE 568-1,251 SD 1/
 VALINE 1,081-2,378 SD 1/
 VESCALAGIN HHB
 VESCALIN HHB
 ZINC 4-10 SD 1/

I/McCarthy & Meredith. 1988. Econ. Bot.
 42(1):

CASTANOSPERMUM AUSTRALE

A. CUNN & FRAS.

"MORETON BAY CHESTNUT"
"BLACK BEAN"

BAYIN WD HHB
 BAYOGENIN WD HHB
 CASTANOGENIN SD 402/
 CASTANOSPERMINE 2-3,000 SD 402/ 404/
 1,7ALPHA-DIEPIALEXINE PL PC29:111
 7,7ALPHA-DIEPIALEXINE PL PC29:111
 6-EPICASTANOSPERMINE SD 404/
 FAT 7,000 SD 402/
 FIBER 5,000 SD 402/
 MEDICAGENIC-ACID SD HHB
 PROTEIN 32,000 SD 402/
 SAPONIN 72,300 SD HHB
 SAPONIN LF WOI
 SAPONIN WD WBB
 STARCH SD WOI

CATALPA OVATA G. DON**"KISASAGE; HSIN-PA-PI"**

CALCIUM 2,890 FR SMO
 CATALPALACTONE TI CCO
 CATALPIN FR HHB
 CATALPINOSIDE FR CCO
 CATALPONOL WD CCO
 CATALPOSIDE FR CCO
 CEROTIC-ACID WD HHB
 CITRIC-ACID FR HHB
 P-COUMARIC-ACID FR HHB
 FERULIC-ACID WD HHB
 ALPHA-DIHYDROCARYOPTERONE WD
 CCO

4,9-DIHYDROXY-ALPHA-LAPACHONE
TI CCO
5,6-DIHYDROXY-7,4'-
DIMETHOXYFLAVONE-6-O-BETA-D-
GLUCOSIDE CCO
5,6-DIHYDROXY-7,4'-
DIMETHOXYFLAVONE-6-O-BETA-
SOPHOROSIDE CCO
GLUCOSE WD HHB
4-HYDROXY-ALPHA-LAPACHONE TI
CCO
9-HYDROXY-ALPHA-LAPACHONE TI
CCO
3,8-DIHYDROXYDEHYDRO-ISO-ALPHA-
LAPACHONE TI CCO
P-HYDROXYBENZOIC-ACID FR CCO
DES-P-HYDROXYBENZOYL-
CATALPOSIDE FR CCO
8-HYDROXYDEHYDRO-ISO-ALPHA-
LAPACHONE TI CCO
8-HYDROXY-2-ISOPROPENYLFURANO-
NAPHTHOQUINONE TI CCO
1-HYDROXY-2-METHYL-ANTHRAQUI-
NONE TI CCO
IRON 140 FR SMO
ISOFERULIC-ACID RT BK HHB
ALPHA-LAPACHONE TI CCO
MAGNESIUM 1,960 FR SMO
MANGANESE 14 FR SMO
MANNOSE WD HHB
MENAQUINONE-1 TI CCO
9-METHOXY-ALPHA-LAPACHONE
OCTADECA-TRANS-9,TRANS-11,CIS-13-
TRIENIC-ACID (415 SEEDOIL)
P-OXYBENZOIC-ACID 20,000 LF HHB
POTASSIUM 13,000 FR SMO
RHAMNOSE WD HHB
B-SITOSTEROL SD HHB
SODIUM 24 FR SMO
SYRINGIC-ACID WD HHB
VANILLIC-ACID WD HHB
VANILLIN WD HHB
XYLOSE WD HHB
ZINC 21 FR SMO

CATHA EDULIS VAHL

“KHAT”

ASCORBIC-ACID 1,610 LF EB27:53
ASH 16,000 LF EB27:53
ASPARAGIC-ACID PL HHB
CALCIUM 2,900 LF EB27:53
CAOUTCHOUC PL CRC

BETA-CAROTENE 18 LF EB27:53
CATECHINS 140,000 LF CRC
CATHIDINE 3,200 LF ALK CRC
CATHINE 2,700 LF ALK CRC
CATHININE 1,500 LF ALK CRC
L-CATHINONE LF ABS
DULCITOL PL CRC
EPHEDRINE LF ALK
PSI-EPHEDRINE LF ALK
FAT 500,000 SD CRC
FIBER 27,000 LF EB27:53
IRON 185 LF EB27:53
MANNITOL PL CRC
MYRICITRIN PL HHB
NIACIN 148 LF EB27:53
NORISOEPHEDRINE LF ALK
NOR-PSI-EPHEDRINE PL ALK
PROTEIN 52,000 LF EB27:53
RIBOFLAVIN 0.5 LF EB27:53
TANNIN LF CRC
THIAMIN 0.5 LF EB27:53

CATHARANTHUS LANCEUS (BOJ.) PICHON

“LANCELEAF PERIWINKLE”

AJMALICINE RT ALK
AMMOCALLINE RT ALK
CATHALANCEINE RT ALK
CATHANNEINE PL JSG
CATHARANTHINE RT ALK
CATHARINE RT ALK
CHATKAVINE PL HHB
DESMETHOXY-HORHAMMERERININE
RT HHB
3,4-DIMETHOXYPHENYLACETAMIDE
LF HHB
HORHAMMERERICINE RT HHB
HORHAMMERERININE RT HHB
LANCEINE RT ALK
LEUROSINE LF ALK
LOCHNERINE LF ALK
PERICALLINE RT ALK
PERICYCLINE PL JSG
PERICYCLIVINE LF ALK
PERIFORMYLINE PL HHB
PERIMIVINE RT ALK
PERIVINE RT ALK
TETRAHYDROALSTONINE LF ALK
VINCOLINE RT ALK
VINDOLINE LF ALK
VINOSIDINE RT ALK
YOHIMBINE 50,000 PL CRC

CATHARANTHUS ROSEUS (L.)

G. DON

"ROSY PERIWINKLE"

"MADAGASCAR PERIWINKLE"

ADENOSINE LF CRC
 AJMALICINE PL CRC
 AKUAMMICINE PL CRC
 AKUAMMINE PL CRC
 ALSTONINE RT RIZ
 AMMOCALINE PL CRC
 BANNUCINE PL RIZ
 L-(+)-BORNESITOL RT RIZ
 D-CAMPHOR 300 RT BK CRC
 CAROSIDINE PL CRC
 CAROSINE PL CRC
 CAROTENE LF CRC
 CATHARANTHINE PL CRC
 CATHARICINE PL CRC
 CATHARINE PL CRC
 CATHAROSINE PL CRC
 CAVINCIDINE PL CRC
 CAVINCINE RT RIZ
 CAVINCINE PL CRC
 CHOLINE PL RIZ
 CLEAVAMINE PL CRC
 DEACETYLVINCALEUKOBLASTINE PL
 CRC
 DEACETYLVINDOLINE PL CRC
 DEHYDROLOGANIN PL RIZ
 DEOXYLOGANIN LF CRC
 DIHYDROSITSIRIKINE PL CRC
 16-EPI-19-S-VINDOLININE-N-OXIDE PL
 RIZ
 FLUOROCARPAMINE-N-OXIDE PL
 RIZ
 FURFURAL LF CRC
 HIRSUTIDINE PL RIZ
 ISOLEURODINE PL CRC
 ISOSITSIRIKINE PL CRC
 KAEMPFEROL PL RIZ
 LEUROCOLOMBINE PL RIZ
 LEUROCISTINE PL CRC
 LEUROSIDINE PL CRC
 LEUROSIDININE PL CRC
 LEUROSINE PL CRC
 LEUROSIVINE RT RIZ
 LOCHNERALLOL LF CRC
 LOCHNERICINE PL CRC
 LOCHNERINE PL CRC
 LOCHNERININE PL CRC
 LOCHNERIVINE RT RIZ

LOCHNEROL LF CRC
 LOCNOVIDINE PL CRC
 LOCHNOVINE PL CRC
 LOGANIN LF CRC
 MAANDROSINE PL CRC
 MALVIDIN PL RIZ
 MANNOSIDE PL RIZ
 MITRAPHYLLINE PL CRC
 NEOLEUROCRISTINE PL CRC
 NEOLEUROSIDINE PL CRC
 OLEANOLIC-ACID PL RIZ
 PERICALLINE PL CRC
 PERMIVIDINE PL CRC
 PERMIVINE PL CRC
 PERIVINE PL CRC
 PEROSINE PL CRC
 PETUNIDINE PL RIZ
 PLEUROSINE PL CRC
 PROTOCATECHUIC-ACID PL RIZ
 PSEUDOVINCALEUKOBLASTINEDIOL
 PL RIZ
 QUERCETIN PL RIZ
 RESERPINE PL CRC
 RESIN 20,000 RT BK CRC
 ROSEOSIDE LF CRC
 ROVIDINE PL CRC
 ROVIDINE-SULFATE PL CRC
 SERPENTINE PL CRC
 BETA-SITOSTEROL PL RIZ
 SITSIRIKINE PL CRC
 SWEROSIDE PL RIZ
 TANNIN LF CRC
 TETRAHYDROALSTONINE PL CRC
 TETRAHYDROSERPENTINE PL CRC
 URSOLIC-ACID LF CRC
 VINAMIDINE PL RIZ
 VINAPHAMINE PL CRC
 VINASPINE PL CRC
 VINBLASTINE PL CRC
 VINCALEUKOBLASTINE PL CRC
 VINCAMICINE PL CRC
 VINCAMINE PL CRC
 VINCARODINE PL CRC
 VINCATHICINE PL CRC
 VINCEINE PL CRC
 VINCOLIDINE PL CRC
 VINCOLINE PL CRC
 VINCRISTINE PL CRC
 VINDOLICINE PL CRC
 VINDOLIDINE PL CRC
 VINDOLINE PL CRC
 VINDOLININE PL CRC
 VINDOROSINE PL CRC

VINOSIDINE RT RIZ
VINSEDECINE PL CRC
VINESESINE PL CRC
VIROSINE PL CRC
YOHIMBINE PL CRC

CAULOPHYLL *z* *THALICTROIDES*
(L.) MICHX.

“BLUE COHOSH”

ALUMINUM 762 RT PED 1/
ANAGYRINE RT HHB
ASCORBIC-ACID 51-52 RT PED
ASH 146,000 RT PED
BAPTIFOLINE RT HHB
CALCIUM 3,890 RT PED
BETA-CAROTENE 24 RT PED
CAULOPHYLLINE RT 411/
CAULOPHYLLOSAPONIN RT
HHB
CAULOSAPONIN RT HHB
CEROTINIC-ACID RT HHB
CHROMIUM 12 RT PED
CITRULLOL RT HHB
COBALT 36 RT PED
EO RT HHB
FAT 6,000 RT PED
FIBER 112,000 RT PED
HEDERAGENIN RT HHB
IRON 1,640 RT PED
KILOCALORIES 2,950 RT PED
LEONTIN RT CRC
MAGNESIUM 1,300 RT PED
MAGNOFLORINE RT HHB
MANGANESE 237 RT PED
N-METHYLCYTISINE RT HHB
NIACIN 13 RT PED
PHOSPHORUS 1,300 RT PED
PHYTOSTEROLS RT HHB
POTASSIUM 7,250 RT PED
PROTEIN 103,000 RT PED
RESIN RT CRC
RIBOFLAVIN 8 RT PED
SAPONIN 1,000 RT HHB
SELENIUM 35 RT PED
SILICON 63 RT PED
SODIUM 29 RT PED
THIAMIN 9.3 RT PED
TIN 21 RT PED
WATER 783,000 RT PED
ZINC TR RT PED

1/PED=Pedersen, M. 1987.

CEDRELA ODORATA L.

“CEDRO COLORADO”

“SPANISH CEDAR”

ANGOLENSIC-ACID-METHYL-ESTER
PL JSG
ASH 83,000 SD CRC
CEDRELANOL PL JSG
FAT 214,000 SD CRC
MEXICANOLIDE PL JSG
ODORATOL PL JSG
ODORATONE PL JSG
PHOTOGEDUNINE PL JSG
PROTEIN 250,000 SD CRC

CEDRUS DEODORA LOUD.

“DEODAR CEDAR”

ACETYLDIPENTENE 38 WD CCO
ALLOHIMACHALOL WD HHB;
ATLANTONE WD MPI
CEDRUSIN WD CCO
CEDRUSIN-4'-GLUCOSIDE WD CCO
CEDRUSININ WD CCO
CENTDAROL WD CCO
DEODARDIONE WD CCO
DEODARIN WD HHB
DEODARONE WD CCO
DEWARIN WD HHB
DEWAROL WD HHB
EO 25,000 WD HHB
FAT 447,000 SD CRC
alpha-HIMACHALENE WD MPI
beta-HIMACHALENE WD MPI
HIMACHALOL WD MPI
ISOCENTDAROL WD CCO
LIMONENE-CARBOXYLIC-ACID
PL JSG
LINOLEIC-ACID 42,465 SD CRC HHB
(+)-LONGIBORNEOL WD HHB
MESO-SECISOLARICIRE SINOL WD
CCO
P-METHYLACETOPHENONE WD
MPI
8C-METHYL-QUERCETIN ST BK MPI
P-METHYL-DELTA-3-
TETRAHYDROACETOPHENONE WD
MPI
PALMITOLEIC-ACID 181,035 SD CRC
HHB
PINITOL LF HHB
PROTEIN 131,000 SD CRC
QUERCETIN ST BK MPI

STEARIC-ACID 37,995 SD CRC HHB
TANNIN 32,000 LF HHB
TOXIFOLIN ST BK MPI

CEDRUS LIBANI A. RICH.

“CEDAR OF LEBANON”

CIS-ATLANTONE PL JSG
BORNEOL
EO 35,000-60,000 WD HHB
QUINIC-ACID 2,000-5,000 LF HHB

CELOSIA CRISTATA L.

“COCKSCOMB”

AMARANTHIN FL WOI
ARSENIC 0.12 FL CAL
BETANIN PL WOI
BETAXANTHIN FL HHB
CALCIUM 8,910 FL CAL
CELOSIANIN FL HHB
COPPER 9 FL CAL
FAT 134,000 SD CRC
FERULIC-ACID FL HHB
IRON 180 FL CAL
ISOAMARANTHIN FL HHB
ISOCÉLOSIANIN FL HHB
MAGNESIUM 6,080 FL CAL
MANGANESE 109 FL CAL
MERCURY 0.29 FL CAL
POTASSIUM 20,600 FL CAL
PROTEIN 181,000 SD CRC
SODIUM 137 FL CAL
ZINC 39 FL CAL

CENCHRUS BIFLORUS ROXB

“TWO-FLOWERED SANDSPUR”

ASH 16,000-18,000 SD CRC
ASH 77,000-116,000 SH CRC
CALCIUM 1,440-1,595 SD CRC
CARBOHYDRATES 623,000-691,000 SD CRC
CARBOHYDRATES 666,000-779,000 SH CRC
FAT 85,000-94,000 SD CRC
FAT 10,000-28,000 SH CRC
FIBER 6,000-7,000 SD CRC
FIBER 185,000-339,000 SH CRC
IRON 220-245 SD CRC
KILOCALORIES 3,700-4,100 SD CRC
PHOSPHORUS 2,700-2,990 SD CRC
PROTEIN 178,000-197,000 SD CRC

PROTEIN 90,000-116,000 SH CRC
WATER 98,000 SD CRC

CENTAUREA CALCITRAPA L.

“STAR-THISTLE”

BETA-AMYRIN
APIGENIN
APIGENIN-7-METHYLGALACTURONIDE
ARACHIDIC-ACID
ASTRAGALIN
BEHENIC-ACID
CENTAURIN
CHOLINE
CICHORIIN FL
CNICIIN FL
FAT 154,000-246,000 SD
INULIN
LIGNOCERIC-ACID
LINOLEIC-ACID
MYRISTIC-ACID
NARINGENIN
OLEIC-ACID
PALMITIC-ACID
PECTIN
PROTEIN 205,000-241,000 SD
RUTIN
QUERCETIN
SCABIOLIDE
BETA-SITOSTEROL
STEARIC-ACID
STIZOLPHINE

CENTAUREA CYANUS L.

“CORNFLOWER”

ACETIC-ACID FL HH
ALUMINUM FL
APIGENIN-4'-O-BETA-D-GLUCOSIDE-7-O-BETA-D-GLUCURONIDE FL CC
APIGENIN-7-GLUCOSIDE LF HHB
APIIN LF HHB
CICHORIIN FL 411/
CNICIN FL 411/
CYANIDIN-3,5-DIGLUCOSIDE FL HHB
CYANIN FL CCO
CYANOCENTAUREIN FL HHB
FAT 158,000-181,000 SD
FRAGARIN FL HHB
IRON
MUCILAGE FL HHB
PELARGONIN FL CCO
POLYGALACTURONIC-ACIDS FL HHB

PROTEIN 194,000-254,000
 PROTOCYANIN FL HHB
 QUERCIMERETRIN FL 411/
 TANNIN FL HH
 TRIDECA-3,5,7,9-TETRAIN-1,11-DIEN RT
 HHB
 TRIDECA-5,7,9-TRIIN-1,3,11-TRIEN RT
 HHB
 WAX HL HHB

CENTAURIUM ERYTHRAEA Rafn.

“CENTAURY”

AMAROGENTIN
 ALPHA-AMYRIN
 BETA-AMYRIN
 CAFFEIC-ACID
 CENTAPICRIN
 CEROTIC-ACID
 CERYL-ALCOHOL
 P-COUMARIC-ACID
 CRATAEGOLIC-ACID
 3,4-DIHYDROXYPHENYLACETIC-ACID
 ERYTHRODIOL
 ERYTHROSTEROL
 FERULIC-ACID
 FLAVONIDS 4,000
 GENTIANIDINE
 GENTIANINE
 GENTIOFLAVINE
 GENTIOFLAVONIDE
 GENTIOPICRIN
 GENTIOPICROSIDE
 N-HEPTACOSANE
 M-HYDROXYBENZOIC-ACID
 P-HYDROXYBENZOIC-ACID
 LINOLEIC-ACID
 LINOLENIC-ACID
 METHYLBELLIDIFOLIN
 N-NONACOSANE
 OLEANOLIC-ACID
 OLEANOLIC-LACTONE
 OLEIC-ACID
 PALMITIC-ACID
 PROTOCATECHUIC-ACID
 SINAPIC-ACID
 BETA-SITOSTEROL
 STEARIC-ACID
 SWEROSIDE
 SWEROSIDE-M-HYDROXYLBENZOYL-
 ESTER
 SWERTIAMARIN
 SYRINGIC-ACID
 VANILLIC ACID

CENTELLA ASIATICA (L.)

URBAN

“GOTU KOLA; PENNYWORT”

ALPHA-ALANINE PL MPI
 ALUMINUM 2,060 LF PED 1/
 ASCORBIC-ACID 40-374 LF CRC
 ASCORBIC-ACID 138 PL ABS 2/ WOI
 ASH 16,000-150,000 LF CRC
 ASIATIC-ACID PL ABS 2/
 ASIATICOSIDE 700-1,200 PL PED
 ASPARTIC-ACID PL MPI
 BETULIC-ACID 1,100 PL MPI
 BICYCLOELEMENE PL PED
 BRAHMIC-ACID PL HHB
 BRAHMINOSIDE 1,600 PL MPI
 BRAHMOSIDE 3,700 PL MPI
 BRAHMIC-ACID 970 PL MPI
 CALCIUM 1,700-15,888 LF CRC
 CAMPESTEROL
 CAMPHOR EO ABS 2/
 CARBOHYDRATES 69,000 LF CRC
 BETA-CAROTENE 66-615 LF CRC
 BETA-CARYOPHYLLENE PL ABS 2/
 CENTELIC-ACID PL ABS 2/
 CENTELLINIC-ACID PL 411/
 CENTELLOSE PL ABS 2/
 CENTELLOSIDE PL 411/
 CENTOIC-ACID PL ABS 2/
 CHROMIUM 10 LF PED
 CINEOLE EO ABS 2/
 COBALT 73 LF PED
 P-CYMOL PL PED
 N-DODECANE EO ABS 2/
 ELAIDIC-ACID PL ABS 2/
 BETA-ELEMENE LF PED
 EO 3,000-6,000 PL PED
 BETA-FARNESENE PL PED
 TRANS-BETA-FARNESENE PL ABS 2/
 FAT 6,000-56,000 LF CRC PED
 FIBER 20,000-187,000 LF CRC PED
 GERMACRENE LF PED
 GERMACRENE-D PL ABS 2/
 GLUCOSE PL PED
 3-GLUCOSYLKAEMPFEROL PL ABS 2/
 7-GLUCOSYLKAEMPFEROL PL ABS 2/
 3-GLUCOSYLQUERCETIN PL ABS 2/
 GLUTAMIC-ACID PL MPI
 GLYCINE PL MPI
 HYDROCOTYLINE 16 PL ABS 2/ WOI
 INDOCENTOIC-ACID PL ABS 2/
 INOSITOL PL PED
 IRON 31-290 LF CRC

ISOBRAHMIC-ACID 9,000 PL MPI
 ISOTHANKUNIC-ACID PL ABS 2/
 ISOTHANKUNISIDE PL ABS 2/
 KAEMPFEROL PL ABS 2/
 KILOCALORIES 340-3,180 LF CRC
 LIGNOCERIC-ACID PL ABS 2/
 LINOLEIC-ACID PL ABS 2/
 MADASIATIC-ACID PL JSG
 MADECASSOSIDE PL PED
 MADECASSIC-ACID PL ABS 2/
 MAGNESIUM 3,200 LF PED
 MANGANESE 277 LF PED
 MEDICASSIC-ACID PL JSG
 METHANOL PL ABS 2/
 MESOINOSITAL PL MPI
 MYO-INOSITOL PL ABS 2/
 NIACIN 12-112 LF CRC PED
 OLEIC-ACID PL ABS 2/
 OXYASIATICOSIDE PL 411/
 PALMITIC-ACID PL ABS 2/
 PECTIN LF PED
 PHOSPHORUS 300-2,804 LF CRC
 POTASSIUM 4,140-38,693 LF CRC
 PROTEIN 16,000-150,000 LF CRC
 RAFFINOSE PL ABS 2/
 RHAMNOSE PL PED
 RIBOFLAVIN 1.4-13 LF CRC PED
 SAPONIN 11,000-80,000 PL ABS 2/
 SELENIUM 12 LF PED
 SILICON 140 LF PED
 BETA-SITOSTEROL PL PED
 SODIUM 1,040 LF PED
 STEARIC-ACID PL ABS 2/
 STIGMASTEROL 40 PL MPI
 THANKUNIC-ACID PL ABS 2/
 THANKUNISIDE PL ABS 2/
 THIAMIN 1.5-14 LF CRC PED
 TIN 12 LF PED
 VELLARINE PL PED
 WATER 893,000 PL CRC
 ZINC 34 BK PED

1/PED=Pedersen, M. 1987.2/

ABS=Kartnig, T. 1988. Clinical Applications of *Centella asiatica* (L.) Urb. pp 145-173 in Craker & Simon. Vol. III

CEPHAELIS IPECACUANHA (BROT.) A. RICH.

“IPECAC”

“RAICILLA”

ALKALOIDS 20,000-40,000 RT HHB 411/
 413/

ASCORBIC-ACID PL HHB
 CEPHAELINE 8575-17,700 RT HHB 464/
 CHELIDONIC-ACID PL HHB
 CHOLINE PL HHB
 CITRIC-ACID PL HHB
 6,7-DEHYDRO-1,11B-BETA-
 DIHYDRORUBREMETINE PL ALK
 DEHYDROBREMETINE PL ALK
 EMETAMINE RT HHB
 EMETINE 4,500 LF 17/
 EMETINE 8,000-26,250 RT HHB
 HYDROIPECAMINE RT HHB
 IPECACUANHIC-ACID RT HHB
 IPECACUANHIN RT HHB
 IPECAMINE RT HHB
 IPECOSIDE 10,000 RT HHB
 ISOEMETINE PL JSG
 KRYPTONINE RT HHB
 MALIC ACID PL HHB
 O-METHYLPSYCHOTRINE RT HHB
 PROTOEMETINE RT HHB
 PSYCHOTRINE RT HHB
 PSYCHOTRINE-METHYL-ETHER RT 17/
 STARCH 300,000-400,000 RT HHB
 TANNINS PL 411/

CEPHALOTAXUS DRUPACEA

“PLUM YEW”

CEPHALOTAXINE ST CCO
 DESMETHYLCEPHALOTAXINE LF CCO
 3-EPI SCHELHAMMERICINE BK CCO
 HOMOHARRINGTONINE ST CCO
 ISOHARRINGTONINE ST CCO
 KAYAFLAVONE PL CCO
 SCHELHAMMERA-ALKALOID ST CCO
 SCHELHAMMERA-ALKALOID-B-
 METHYL-ETHER
 ST CCO

CEPHALOTAXUS FORTUNEI HOOK.

“FORTUNE’S PLUM YEW”

(+)-ACETYLCEPHALOTAXINE ST CCO
 CEPHALOFORTUNEINE ST CCO
 CEPHALOTAXINE ST CCO
 DESMETHYLCEPHALOTAXINONE ST
 CCO
 3-EPIWILSONINE ST CCO
 HAINANENSINE PL CCO
 HAINANOLIDE PL CCO
 HARRINGTONINE ST CCO

HOMOHARRINGTONINE ST CCO
 4-HYDROXYCEPHALOTAXINE ST CCO
 11-HYDROXYCEPHALOTAXINE ST
 CCO

CEPHALOTAXUS HAINANENSIS
 HOOK.

“HAINAN PLUM YEW”

HAINANENSINE PL CCO

CEPHALOTAXUS HARRINGTONII
 (D. DON) C. KOCH

“JAPANESE PLUM YEW”

CEPHALOTAXINE 0.8-28.5 TC ABS
 CEPHALOTAXINONE PL ABS
 DEOXYHARRINGTONINE PL ABS
 DESMETHYLCEPHALOTAXINE LF CCO
 DRUPACINE PL ABS
 3-EPISCHELHAMMERICINE BK CCO
 HARRINGTONINE 500 FR 463/
 HARRINGTONINE 0-0.2 TC PM39:168
 HOMODEOXYHARRINGTONINE TC
 PC16:1595
 HOMO-ERYTHRINA-ALKALOID 0.2-6.5
 TC PM39:168
 HOMOHARRINGTONINE 0-1.2 TC
 PM39:168
 11-HYDROXYCEPHALOTAXINE PL ABS
 ISOHARRINGTONINE 0.2-1.5 TC
 PM39:168
 KAYAFLAVONE PL CCO
 SCHELHAMMERA-ALKALOID ST CCO
 SCHELHAMMERA-ALKALOID-B-
 METHYL-ETHER ST CCO

CEPHALOTAXUS MANNII

“MANN’S PLUM YEW”

BACCATIN-III PL ABS
 CEPHALOMANNINE PL ABS
 TAXOL PL ABS

CEPHALOTAXUS SPP

“GENERIC PLUM YEW”

ACETYLCEPHALOTAXINE PL ABS
 CEPHALOMANNINE PL ABS
 CEPHALOTAXINE PL ABS
 CEPHALOTAXINONE PL ABS
 DEOXYHARRINGTONINE PL ABS

DESMETHYLCEPHALOTAXINONE PL
 ABS
 DRUPACINEHARRINGTONINE PL ABS
 HOMOERYTHRINA-ALKALOIDS PL
 ABS
 HOMOHARRINGTONINE PL ABS
 11-HYDROXYCEPHALOTAXINE PL ABS
 ISOHARRINGTONINE PL ABS

CEPHALOTAXUS WILSONIANA
 HAYATA

“WILSON’S PLUM YEW”

ACETYLCEPHALOTAXINE BK 462/
 CEPHALOTAXID LF CCO
 CEPHALOTAXINE BK 462/
 3-EPISCHELHAMMERICINE BK CCO
 EPIWILSONINE BK FR CCO
 ISOHARRINGTONINE BK CCO
 SCIADOPITYSIN LF CCO
 WILSONINE PL 462/

CERATONIA SILIQUA L.

“CAROB; ST. JOHN’S-BREAD”

ALANINE 19,270 SD JAD 1/
 ALPHA-AMINOPIMELIC-ACID SD HHB
 AMINO-ACIDS 432,400 SD JAD 1/
 ARGININE 55,460 SD JAD
 ASH 20,000 FR HHB
 ASH 30,000 SD HHB
 ASPARTIC-ACID 42,300 SD JAD
 BENZOIC-ACID FR HHB
 BUTYRIC-ACID FR HHB
 CAPRONIC-ACID FR HHB
 CARUBIN SD HHB
 CATECHIN-TANNIN FR HHB
 CELLULOSE FR HHB
 CELLULOSE 32,500 SD HHB
 CERATONIAASE SD HHB
 CERATOSE FR HHB
 CHIRO-INOSITOL 1,000 FR ABS
 CONCANAVALIN-A FR HHB
 FAT 5,000-13,000 FR HHB
 FAT 2,000 SD HHB
 FORMIC-ACID FR HHB
 FRUCTOSE 50,700-118,300 FR HHB
 D-GALACTOSE SD FR
 GALLIC-ACID FR HHB
 BETA-D-1,6-DI-O-GALLOYLGLUCOSE
 FR HHB
 BETA-D-GLUCOGALLIN FR HHB
 GLUCOSE 56,700-132,300 FR HHB

GLUTAMIC-ACID 131,600 SD JAD
 GLYCINE 24,910 SD JAD
 GUM 350,000 SD HHB
 HEMICELLULOSE FR HHB
 HEMICELLULOSE 32,500 SD HHB
 HISTIDINE 11,750 SD JAD
 HYDROXYPROLINE 470 SD JAD
 INVERT-SUGARS 39,000-91,000 FR HHB
 ISOBUTYRIC-ACID 6,000-13,000 FR HHB
 ISOLEUCINE 16,450 SD JAD
 LEUCINE 30,550 SD JAD
 LEUCODELPHINIDIN FR HHB
 LIGNIN FR HHB
 LYSINE 26,320 SD JAD
 D-MANNOSE FR HHB
 METHIONINE 4,700 SD JAD
 MUCILAGE 20,000-30,000 FR HHB
 MUCILAGE 400,000 SD HHB
 MYOINOSITOL 5,000-10,000 FR ABS
 PECTIN FR HHB
 PENTOSANE 54,000 FR HHB
 PHENYLALANINE 15,040 SD JAD
 PINTOL 50,000-75,000 FR ABS
 PRIMVEROSE FR HHB
 PROLINE 18,800 SD JAD
 PROTEIN 410,000-630,000 SD HHB
 SACCAROSE 60,000-368,000 FR HHB
 SAPONIN FR HHB
 SERINE 23,500 SD JAD
 STARCH 350,000 FR HHB
 SUCROSE FR ABS
 SUGARS 300,000-700,000 FR HHB
 TANNIN 12,000 FR HHB
 TANNIN 15,000 FR HHB
 THREONINE 16,920 SD JAD
 TOCOPHEROL SD HHB
 TYROSINE 16,450 SD JAD
 VALINE 20,680 SD JAD
 WATER 37,000-247,000 FR WOI
 WATER 88,900-136,300 SD WOI
 XYLOSE 6,900-16,100 FR HHB

1/=SEE PLENUM HANDBOOK OF
LEGUMES

CHAENOMELES LAGENARIA KOIDZ.

“CHINESE QUINCE; MU-KUA”

ARSENIC 0.07 FR CAL
 CALCIUM 2,300 FR CAL
 CITRIC-ACID FR CCO
 COPPER 24 FR CAL
 HCN SD CCO

IRON 110 FR CAL
 MAGNESIUM 990 FR CAL
 MALIC-ACID FR CCO
 MANGANESE 15 FR CAL
 MERCURY 0.05 FR CAL
 POTASSIUM 13,200 FR CAL
 SODIUM 80 FR CAL
 TARTARIC-ACID FR CCO
 ZINC 21 FR CAL

CHAMAEMELUM NOBILE (L.) ALL.

“ROMAN CAMOMILE;
 GARDEN CAMOMILE;
 PERENNIAL CAMOMILE”

ALUMINUM 27 FL PED
 ANTHEMIC-ACID PL 1/
 ANTHEMOL PL 1/
 APIGENIN PL 1/
 APIGENIN-7-APIOSYLGLUCOSIDE PL 1/
 APIGENIN-7-GLUCOSIDE-(2",3")-
 DIACETATE PL 1/
 APIGETRIN PL PED
 APIIN PL PED
 ASCORBIC-ACID 267 FL PED
 ASH 62,000 FL PED
 AZULENE PL 1/
 BISABOLENE PL 1/
 ALPHA-BISABOLENE-OXIDE-A PL PED
 BETA-BISABOLENE PL 1/
 ALPHA-BISABOLOL-OXIDE-A PL PED
 ALPHA-BISABOLOL-OXIDE-B PL PED
 BORNEOL PL 1/
 BETA-BOURBONENE PL 1/
 (-)-BUTANE-1,3-DIYL-1-((Z)-2'-METHYL-
 2'-BUTENOATE)-3-ISOB...
 N-BUTANOL PL 1/
 BUTYL-ANGELATE PL 1/
 ALPHA-CADINENE PL 1/
 CAFFEIC-ACID PL 1/
 CALCIUM 6,720 FL PED
 CAMPHENE PL 1/
 CARBOHYDRATES 785,000 FL PED
 BETA-CAROTENE 2.2 FL PED
 BETA-CARYOPHYLLENE PL 1/
 CHAMAZULENE PL 1/
 CHOLINE PL 1/
 CHROMIUM 6 FL PED
 1,8-CINEOLE PL 1/
 COBALT 58 FL PED
 ALPHA-COPAENE PL 1/
 BETA-COPAENE PL 1/

- ALPHA-CUBEENE PL 1/
 BETA-CUBEENE PL 1/
 CYCLODODECANE
 P-CYME PL 1/
 BETA-DAMASCENONE PL 1/
 DEHYDROMATRICARIA-ESTER
 3-DEHYDRONOBILIN PL 1/
 2,3-DIHYDROXYCINNAMIC-ACID PL 1/
 3,4-DIHYDROXYCINNAMIC-ACID PL 1/
 EPSILON-1-(2,6-DIMETHYLPHENYL)-2-BUTEN-1-ONE PL 1/
 ALPHA-P-DIMETHYLSTYRENE PL 1/
 EN-YN-DICYCLOETHER PL PED
 EO 6,000-17,500
 EPICATECHOL PL 1/
 3-EPINOBILIN PL 1/
 1,10-EPOXYNOBILIN PL 1/
 EUCANNABINOLIDE PL 1/
 FARNESENE PL PED
 FARNESOL PL 1/
 FAT 39,000 FL PED
 FERULIC-ACID PL 1/
 FIBER 72,000 FL PED
 5-(3-FURYL)-2-METHYL-1-PENTEN-3-OL PL 1/
 5-(3-FURYL)-2-METHYL-1-PENTEN-3-ONE PL 1/
 GERMACRENE-D PL 1/
 HERNIARIN PL PED
 HEXYLACETATE PL 1/
 HEXYLBUTYRATE PL 1/
 HUMULENE PL 1/
 HYDROXYISONOBILIN PL 1/
 3-HYDROXY-2-METHYLIDENE-BUTYRIC-ACID-ANGELATE PL 1/
 INOSITOL FL HHB
 IRON 170 FL PED
 ISOAMYL-ANGELATE PL 1/
 ISOAMYL-BUTYRATE PL 1/
 ISOAMYL-2-METHYLBUTYRATE PL 1/
 ISOAMYL-PROPIONATE PL 1/
 ISOBUTANOL PL 1/
 ISOBUTYL-ANGELATE PL 1/
 ISOBUTYL-BUTYRATE PL 1/
 ISOBUTYL-ISOBUTYRATE PL 1/
 ISOBUTYL-ISOVALERIANATE PL 1/
 ISOBUTYL-2-METHYLBUTYRATE PL 1/
 4-ISOPROPENYL-BENZALDEHYDE PL 1/
 4-ISOPROPENYL-TOLUENE PL 1/
 5-ISOPROPENYL-2'-(2-METHYLPROPYL)-2-CYCLOHEXEN-1-ONE PL 1/
 5-ISOPROPYL-2-PROPYL-2-CYCLOHEXEN-1-ONE PL 1/
 KILOCALORIES 2,999 FL PED
 LIMONENE PL 1/
 LUTEOLIN PL 1/
 LUTEOLIN-7-GLUCOSIDE PL 1/
 MAGNESIUM 2,920 FL PED
 MANGANESE 52 FL PED
 METHACRYLIC-ACID PL 1/
 METHACRYLIC-ACID-ESTER PL 1/
 3-METHYLAMYL-ANGELATE PL 1/
 3-METHYL-1-BUTANOL PL 1/
 3-METHYLBUTYL-ANGELATE PL 1/
 2-METHYLBUTYL-BUTYRATE
 ALPHA-METHYLBUTYL-ISOBUTYRATE PL 1/
 2-METHYLBUTYL-2-METHYLBUTYRATE PL 1/
 2-METHYLBUTYL-2-METHYLPROPIONATE PL 1/
 3-METHYLIDENE-4-oxypentyl-ANGELATE PL 1/
 2-METHYLIDENEPROPANE-1,3-DIYL-1-(Z)-2'-METHYL-2'-BUTENOATE...
 D-3-METHYL-PENTANOL
 3-METHYLPENTYL-ANGELATE PL 1/
 2-METHYL-PROPANE-1,3-DIYL-1-(Z)-2'-METHYL-2'-BUTENOATE...
 2-METHYL-2-PROPYL-ANGELATE PL 1/
 2-METHYLPROPYL-BUTYRATE PL 1/
 2-METHYLPROPYL-2-METHYLBUTYRATE PL 1/
 2-METHYLPROPYL-3-METHYLBUTYRATE PL 1/
 MYRCENE PL
 BETA-MYRCENE PL 1/
 MYRTENAL PL 1/
 MYRTENOL PL 1/
 NEROLIDOL PL 1/
 NIACIN 149 FL PED
 NOBILIN PL 1/
 PHOSPHORUS 3,220 FL PED
 PINENE BACTERICIDE EXPECTORANT FNF
 ALPHA-PINENE PL 1/
 BETA-PINENE PL 1/
 PINOCAMPHONE PL 1/
 ALPHA-TRANS-PINOCARVEOL PL 1/
 ALPHA-TRANS-PINOCARVONE PL 1/
 POLYACETYLENE PL 1/
 POTASSIUM 13,200 FL PED
 PROPYL-ANGELATE PL 1/
 PROTEIN 115,000 FL PED

QUERCETRIN PL 1/
 QUECIMERITRIN PL PED
 RIBOFLAVIN 4.3 FL PED
 RUTIN PL 1/
 SABINENE PL 1/
 SCOPOLETIN PL 41PL 1/
 SCOPOLETIN-7-GLUCOSIDE PL 1/
 SCOPOLETOL PL 1/
 BETA-SELINENE PL 1/
 SELENIUM 7.8 FL PED
 SILICON 31 FL PED
 SODIUM 2,580 FL PED
 TANNIN PL 1/
 TARAXASTEROL PL 1/
 ALPHA-TERPINENE PL 1/
 THIAMIN 0.8 FL PED
 TIGLIC-ACID PL 1/
 TIGLIC-ACID-ESTER PL 1/
 TIN 10 FL PED
 TRIACONTANE PL 1/
 UMBELLIFERONE PL PED
 WATER 812,000 FL PED
 ZINC TR FL PED

1/ Qualitative data derived from Mann, C. and Staba, E. J. 1986. in: The Chemistry, Pharmacology, and Commercial Formulations of Chamomile. Herbs, Spices, and Medicinal Plants. Vol. 1. Oryx Press, Phoenix. Most mineral data from Pedersen, 1987.

CHAMAESCYCE HYPERICIFOLIA MILLSP.

“SPURGE”

CAOUTCHOUC LX CRC
 GALLIC-ACID LX CRC
 PHORBOL-ESTERS LX CRC
 RESIN PL CRC
 TANNIN PL CRC

CHELIDONIUM MAJUS L.

“CELANDINE”

ALKALOIDS 2,500-17,000 PL ABS1/ HHB
 ALKALOIDS 5,000-22,000 PL ABS HHB
 ALLOCRYPTOPINE PL FNF
 BERBERINE PL HHB
 CHELAMIDINE PL HHB
 CHELAMINE PL HHB
 CHELERITINE RT HHB
 CHELERYTHRINE PL HHB

CHELIDAMINE PL CRC
 CHELIDONIC-ACID PL HHB
 CHELIDONINE PL HHB
 CHELIDONIOL RT 411/
 CHELILUTINE PL HHB
 CHELIRUBINE PL CRC
 CHOLINE FR HHB
 CITRIC-ACID PL HHB
 COPTISINE PL HHB
 CORYSAMINE PL HHB
 DIHYDROSANGUINARINE RT HHB
 EO=130 PL HHB
 ERGOSTEROL RT HHB
 FAT 466,000 SD HHB
 FORMIC-ACID PL HHB
 HISTAMINE PL HHB
 ALPHA-HOMOCHELIDONINE PL HHB
 GAMMA-HOMOCHELIDONINE PL HHB
 HYDROXYCHELIDONINE PL CRC
 HYDROXYSANGUINARINE PL CRC
 MAGNOFLORINE PL 411/
 MALIC-ACID PL HHB
 METHOXYCHELIDONINE PL HHB
 METHYLAMINE PL HHB
 NICOTINIC-ACID 340 PL HHB
 NONACOSANOL PL HHB
 OXYCHELIDONINE PL HHB
 OXYSANGUINARINE PL HHB
 PROTOPINE PL HHB
 SANGUINARINE PL HHB
 L-SPARTEINE PL HHB
 SPINASTEROL RT HHB
 STYLOPINE PL HHB
 SUCCINIC-ACID PL HHB
 TETRAHYDROCOPTISINE 1,500 FR HHB
 TYRAMINE PL HHB

ABS1/=ACTA PHARM JUGOSL
 32:225.1982

CHENOPodium ALBUM L.

“LAMBSQUARTER”

ALANINE 3,220-20,511 PL USA
 AMMONIA PL
 ARGININE 2,530-16,116 PL USA
 ASCARIDOLE TR
 ASCORBIC-ACID 600-9,000 PL CRC USA
 ASPARTIC-ACID 4,310-27,457 PL USA
 BETAINE 12,200 LF
 CALCIUM 3,000 SD
 CALCIUM 3,090-33,800 LF CRC USA
 CAMPESTEROL FT 56:172.1985

CARBOHYDRATES 73,000-500,000 LF
CRC USA
BETA-CAROTENE 71-316 LF CRC USA
CHENOPODINE
COPPER 5 SD
CYSTINE 890-5,669
BETA-ECDYSTERONE RT RIZK
FAT 55,000-85,000 SD
FAT 8,000-50,960 LD CRC USA
FERULIC-ACID FR
FIBER 21,000-217,000 LF CRC USA
GLUTAMIC-ACID 5,210-33,188 LF USA
GLYCINE 2,490-15,861 LF USA
HCN
HISTIDINE 1,160-7,389 LF USA
IMPERATORIN FT56:172.1985
IRON 5 SD
IRON 12-250 LF CRC USA
ISOLEUCINE 2,530-16,116 LF USA
LEUCINE 3,500-22,295 LF USA
LYSINE 54,000 SD
LYSINE 3,540-22,550 SD USA
MAGNESIUM 2,920 SD
MANGANESE 21 SD
METHIONINE 490-3,121 LF USA
MOLYBDENUM 0.67
NIACIN 35 SD
NIACIN 12-76 LF CRC USA
N-NONACOSANE
OCTACOSANYL-ACETATE RIZK
OLEANOLIC-ACID RIZK
OXALATE 86,100 RIZK
OXALIC-ACID 140,000-300,000
PHENYLALANINE 1,660-10,574 LF USA
PHOSPHORUS 4,160 SD
PHOSPHORUS 720-36,833 LF CRC USA
POLYPODINE-B RT
POTASSIUM 87,100 LF CRC
PROLINE 2,230-14,205 LF USA
PROTEIN 132,000-159,000 SD
PROTEIN 42,000-307,000 LF CRC USA
RIBOFLAVIN 1-2 SD
RIBOFLAVIN 12-76 LF CRC USA
SCOPOLETIN FT56:172.1985
SERINE 2,000-12,740 LF USA
SITOSTEROL RIZK
SODIUM 250 LF CRC
STIGMASTEROL
THIAMIN 1-2 SD
THIAMIN 1-10 LF CRC USA
THREONINE 1,630-10,383 LF USA
N-TRIACONTANOL FT56:172.1985
TRIGONELLINE
TRYPTOPHAN 380-2,421 LF USA

TYROSINE 1,750-11,148 LF USA
VALINE 2,260-14,396 LF USA
VANILLIC-ACID FR
WATER 88,000-94,000 SD
WATER 840,300 LF USA
XANTHOTOXIN FT56:172.1985
ZINC 24 SD

CHENOPODIUM AMBROSIOIDES
L.

“EPAZOTE”
“WORMSEED”

ARITASONE 9-1,400 PL GEO HHB JSG
ASCARIDOLE 185-18,000 LF CRC GEO
ASCORBIC-ACID 110-1,020 LF CRC JFM
WOI
ASH 24,000-166,000 LF CRC
BUTYRIC-ACID PL WOI
CALCIUM 3,000-21,000 LF CRC
D-CAMPHOR PL CRC
CARBOHYDRATES 76,000-524,000 LF
CRC
BETA-CAROTENE 35-165 LF CRC JFM
P-CYMENE 365-4,400 LF CRC GEO
P-CYMOL 730-8,000 PL CRC GEO HHB
EO 1,830-25,000 FR WOI
EO 2,000-3,000 LF HHB WOI
FAR 7,000-48,000 LF CRC
FAT 92,000 DR JFM
FERULIC-ACID FR HHB
FIBER 13,000-90,000 LF CRC
GERANIOL PL CRC
IRON 52
KILOCALORIES 420-900 LF CRC
LEUCINE PL HHB
LIMONENE PL CRC
MALIC-ACID FR HHB
MENTHADIENE PL WOI
METHYL-SALICYLATE PL JFM WOI
MYRCENE PL CRC
NIACIN 5-40 LF CRC
PHOSPHORUS 520-3,585 LF CRC
ALPHA-PINENE 440-4,800 PL CRC GEO
L-PINOCARVONE 1,040-11,400 PL GEO
CRC
PROTEIN 38,000-262,000 LF CRC
PROTEIN 156,000 FR JEL
RIBOFLAVIN 3-19 LF CRC
SAFROLE PL WOI
SAPONINS 25,000 RT CRC
SODIUM 10-70 LF CRC
SPINASTEROL PL CRC

TARTARIC-ACID PL HHB
 TERPINENE PL JFM
 TERPINYL-ACETATE 75 PL HHB
 TERPINYL-SALICYLATE 75 PL HHB
 THIAMIN 0.6-4 LF CRC
 TRIACONTYL-ALCOHOL PL CRC
 TRIMETHYLAMINE PL CRC
 UREASE PL JFM
 VANILLIC-ACID FR HHB
 WATER 855,000 LF CRC

CHIMAPHILA UMBELLATA (L.)
 NUTT.

“PIPSISSEWA; KING’S CURE”

BETA-AMYRIN 2,100 PL HHB
 ARBUTIN 75,000 PL AYL HHB
 AVICULARIN PL HHB
 CHIMAPHILIN 2,000 PL HHB
 2,7-DIMETHYL-1,4-NAPHTHOQUINONE
 2,000 PL AYL
 EPICATECHIN-GALLATE PL AYL
 GUM PL HHB
 HENTRIACONTANE PL HHB
 HOMOGENSIC-ACID-GLUCOSIDE PL
 HHB
 HYPEROSIDE PL HHB
 ISOHOMOARBUTIN PL HHB
 KAEMPFEROL PL HHB
 METHYL-SALICYLATE PL AYL
 NONACOSANE PL HHB
 RENIFOLIN PL 411/
 RESIN PL HHB
 SALICYLIC-ACID-METHYL-ESTER PL
 HHB
 BETA-SITOSTEROL PL HHB
 STARCH PL HHB
 SUGAR PL HHB
 TANNIN 40,000 PL HHB
 TARAXASTEROL PL HHB
 TOLUQUINOL PL AYL
 URSOLIC-ACID PL HHB

CHONDODENDRON
TOMENTOSUM RUIZ & PAVON

“CURARE”

L-BEEBERINE PL 411/
 N-BENZYL-PHTHALIMIDE RT HHB
 CHONDOCURARINE LF ALK
 CHONDOCURINE LF ALK
 CHONDODINE RT ALK
 CURINE LF ALK

CYCLEANINE RT HHB
 ISOCHONDODENDRINE RT HHB
 NORCYCLEANINE PL ALK
 PELONINE RT HHB
 TOMETOCURINE SD ALK
 TUBOCURARINE LF ALK
 D-TUBOCURARINE RT HHB
 L-TUBOCURARINE RT HHB

CHONDRUS CRISPUS (L.)
 STACKH.

“IRISH MOSS” (AN ALGA)

ALUMINUM 355 PL PED
 ARSENIC 10 PL PED
 ASCORBIC-ACID 130 PL PED
 ASH 150,000 PL PED
 CALCIUM 18,820 PL PED
 CARBOHYDRATES 862,000 PL PED
 BETA-CAROTENE 55 PL PED
 CARRAGENAN PL 411/
 CHROMIUM 12 PL PED
 COBALT 70 PL PED
 FAT 12,000 PL PED
 FIBER 111,000 PL PED
 IRON 874 PL PED
 KILOCALORIES 2,430 PL PED
 LEAD TR PL PED
 MAGNESIUM 19,600 PL PED
 MANGANESE 38 PL PED
 MERCURY 7 PL PED
 NIACIN 83 PL PED
 PHOSPHORUS 1,800 PL PED
 POTASSIUM 13,310 PL PED
 PROTEIN 123,000 PL PED
 RIBOFLAVIN 1.1 PL PED
 SELENIUM 18 PL PED
 SILICON 67 PL PED
 SODIUM 81,200 PL PED
 THIAMIN 2.3 PL PED
 TIN 27 PL PED
 WATER 834,000 PL PED
 ZINC 44 PL PED

1/PED=Pedersen, M. 1987.

CHRYSANTHEMUM
BALSAMITA L.

“BALSAMITE; COSTMARY”

BORNEOL PL BML
 CAMPHENE PL BML
 L-CAMPHOR 456-546 PL BML HHB
 L-CARVONE 420-480 PL HHB

1,8-CINEOLE PL BML
EO 600 PL HHB
ISOBORNEOL PL HHB
LIMONENE PL BML
ALPHA-PINENE PL BML
BETA-PINENE PL BML
TANNIN PL HHB

CHRYSANTHEMUM**CINERARIIFOLIUM(TREVIR.)VIS.****"PYRETHRUM"**

BETA-AMYRIN FL CRC
ASH 71,000 SH CRC
CALCIUM 5,300 SH CRC
CARBOHYDRATES 794,000 SH CRC
CHOLINE PL HHB
CHRYSANIN FL CRC
CHRYSANOLIDE FL CRC
CHRYSANTHEMIC-ACID-ESTER FL 411/
CHRYSANTHEMINE PL JSG
CINERINS FL 411/
BETA-CYCLOPYRETHROSIN FL HHB
FAT 5,000 SH CRC
FIBER 236,000 SH CRC
JASMOLINS FL 411/
PHOSPHORUS 2,400 SH CRC
PROTEIN 130,000 SH CRC
PYRETHRIN 7,000-20,000 FL CRC
PYRETHRIC-ACID FL 411/
PYRETHROL FL 411/
PYRETHROSIN PL JAG
PYRETHROTOXIC-ACID FL CRC
(+)-SESAMIN FL HHB
STACHYDRINE PL HHB

CHRYSANTHEMUM**CORONARIUM L.****"GARLAND CHRYSANTHEMUM"**

ASCORBIC-ACID 370-4,975 BD USA
ASCORBIC-ACID 270-4,155 LF USA
ASH 13,400-180,110 BD USA
ASH 11,000-169,230 LF CRC
CALCIUM 560-7,525 BD USA
CALCIUM 630-9,690 LF CRC
CARBOHYDRATES 43,700-587,365 BD
USA
CARBOHYDRATES 33,000-507,700 LF
CRC
BETA-CAROTENE 88-1,183 BD USA
BETA-CAROTENE 32-485 LF CRC
CORONARIC-ACID SD CCO

DIHYDROCUMAMBRIN-A PL JSG
FAT 1,700-22,850 BD USA
FAT 3,000-46,155 LF CRC
FIBER 8,900-119,625 BD USA
FIBER 9,000-138,460 LF CRC
FOLACIN 0.7-10 BD USA
IRON 31-420 BD USA
IRON 25-385 LF CRC
KILOCALORIES 170-2,285 BD USA
KILOCALORIES 190-2,923 LF CRC
MAGNESIUM 170-2,285 BD USA
MUTATOCHROME PL JSG
NIACIN 8-115 BD USA
NIACIN 6-92 LF CRC
PHOSPHORUS 320-4,300 BD USA
PHOSPHORUS 340-5,230 LF USA
POTASSIUM 5,710-76,745 BD USA
POTASSIUM 2,560-39,385 LF CRC
PROTEIN 15,600-209,680 BD USA
PROTEIN 18,000-276,925 LF CRC
RIBOFLAVIN 2.2-30 BD USA
RIBOFLAVIN 1.9-29 LF CRC
SODIUM 520-6,990 BD USA
SODIUM 1,060-16,300 LF CRC
THIAMIN 0.3-4.2 BD USA
THIAMIN 0.9-14 LF CRC
WATER 925,600 BD USA
WATER 935,000 LF CRC

CHRYSANTHEMUM**PARTHENIUM (L.) BERNH.****"FEVERFEW"**

ALUMINUM 6 PL PED
APIGENIN-7-GLUCOSIDE PL HHB
ASCORBIC-ACID 330 PL PED
ASH 171,000 PL PED
L-BORNEOL PL HHB
CALCIUM 5,810 PL PED
L-CAMPHOR EO HHB
CARBOHYDRATES 514,000 PL PED
BETA-CAROTENE 14 PL PED
CHROMIUM 17 PL PED
CHRYSANTHEMOLIDE PL JSG
CHRYSANTHEMOMIN PL JSG
CHRYSARTEN-A PL JSG
CHRYSARTEN-B PL JSG
COBALT TR PL PED
COSMOSIIN FL HHB
EO 200-700 PL HHB
10-EPICANIN PL JSG
FAT 48,000 PL PED
FAT 312,000 SD CRC

FIBER 143,000 PL PED
 1-BETA-HYDROXYARBUSCULIN PL
 JSG
 8-BETA-REYNOSIN PL JSG
 IRON TR PL PED
 KILOCALORIES 2,860 PL PED
 MAGNESIUM 2,400 PL PED
 MANGANESE 81 PL PED
 MANGOLIOLIDE PL JSG
 NIACIN 285 PL PED
 PARTHENOLIDE FL HHB
 PARTHOLIDE PL JSG
 PHOSPHORUS 5,010 PL PED
 POTASSIUM 22,500 PL PED
 PROTEIN 267,000 PL PED
 PROTEIN 222,000 SD CRC
 REYNOSIN PL JSG
 RIBOFLAVIN 2.5 PL PED
 SANTAMARIN FL HHB
 SANTAMARIN LF HHB
 SELENIUM 17 PL PED
 SILICON 46 PL PED
 SODIUM 48 PL PED
 TANAPARTHIN PL JSG
 TANAPARTHIN-1ALPHA,4ALPHA-
 EPOXIDE PL JSG
 TANAPARTHIN-1BETA,4BETA-EPOXIDE
 PL JSG
 THIAMIN 4.1 PL PED
 TIN 21 PL PED
 WATER 895,000 PL PED
 ZINC TR PL PED

CICER ARIETINUM L.

“CHICKPEA, GARBANZO”

ALANINE 8,280-9,360 SD USA
 ARGININE 11,500-20,560 SD USA
 EFN26:71
 ASCORBIC-ACID 30-56 SD USA
 ASH 24,000-28,900 SD USA
 ASPARTIC-ACID 22,700-25,660 SD USA
 CALCIUM 1,020-1,220 SD USA
 CARBOHYDRATES 606,600-685,700 SD
 USA
 BETA-CAROTENE 0.4-0.5 SD USA
 COPPER 8-10 SD USA
 CYSTINE 2,470-2,930 SD USA EFN26:71
 FAT 59,000-69,750 SD USA
 FIBER 38,900-48,570 SD USA
 FOLACIN 5-6 SD USA
 GLUTAMIC-ACID 33,600-38,150 SD USA
 EFN26:71

GLYCINE 8,030-9,075 SD USA
 HISTIDINE 4,620-6,000 SD USA
 EFN26:71
 IRON 61-72 SD USA
 ISOLEUCINE 8,280-10,320 SD USA
 EFN26:71
 KILOCALORIES 2,550-4,114 SD USA
 EFN26:71
 LEUCINE 11,520-15,530 SD USA
 EFN26:71
 LINOLEIC-ACID 25,930-29,310 SD USA
 LINOLENIC-ACID 1,010-1,140 SD USA
 LYSINE 12,910-14,595 SD USA
 MAGNESIUM 1,110-1,348 SD USA
 MANGANESE 21-26 SD USA
 METHIONINE 2,320-2,860 SD USA
 EFN26:71
 MUFA 13,580-15,350 SD USA
 MYRISTIC-ACID 90-100 SD USA
 NIACIN 15-18 SD USA
 OLEIC-ACID 13,460-15,215 SD USA
 OXALIC-ACID 24 SD WBB
 PALMITIC-ACID 5,010-5,665 SD USA
 PALMITOLEIC-ACID 120-135SD USA
 PANTOTHENIC-ACID 15-18 SD USA
 PHENYLALANINE 10,340-12,290 SD USA
 EFN26:71
 PHOSPHORUS 3,540-4,275 SD USA
 PHYTOSTEROLS 350-395 SD USA
 POTASSIUM 8,460-10,220 SD USA
 PROLINE 7,970-16,530 SD USA EFN26:71
 PROTEIN 191,000-220,000 SD USA
 PUFA 26,940-30,450 SD USA
 RIBOFLAVIN 2-3 SD USA
 SERINE 9,730-11,000 SD USA
 SFA 6,260-7,075 SD USA
 SODIUM 220-310 SD USA
 STEARIC-ACID 850-960 SD USA
 THIAMIN 4-6 SD USA
 THREONINE 7,160-8,090 SD USA
 TRYPTOPHAN 1,850-4,970 SD USA
 EFN26:71
 TYROSINE 4,790-5,415 SD USA
 VALINE 8,090-10,150 SD USA EFN26:71
 VIT-B65-6 SD USA
 WATER 108,220-122,380 SD USA
 ZINC 33-50 SD USA

CICHORIUM ENDIVIA L.

“ENDIVE; ESCAROLE”

ALANINE 620-9,984 LF USA
 ALUMINUM 60-168 LF USG

ARGININE 620-9,984 LF USA
 ARSENIC 0.04-0.048 LF USG
 ASCORBIC-ACID 462-9,302 LF USA
 ASH 13,590-240,000 LF USA USG
 ASPARTIC-ACID 1,300-20,934 LF USA
 BARIUM 14-24 LF USG
 BORON 1-24 LF BOB USG
 CADMIUM 0.2-0.24 LF USG
 CAFFEIC-ACID LF JAF38:2116
 CALCIUM 462-10,080 LF USA USG
 CAOUTCHOUC LX HHB
 CARBOHYDRATES 33,500-539,452 LF
 USA
 BETA-CAROTENE 9.6-241 LF USA
 CHROMIUM 0.3-0.48 LF USG
 COBALT 0.2-0.24 LF USG
 COPPER 1-16.8 LF USA USG
 CYSTINE 100-1,610 LF USA
 FAT 2,000-32,200 LF USA
 FIBER 9,000-144,927 LF USA
 FOLACIN 1.2-25 LF USA
 GLUTAMIC-ACID 1,660-26,731 LF USA
 GLYCINE 580-9,340 LF USA
 HISTIDINE 230-3,704 LF USA
 HYDROXYCINNAMIC-ACID LF
 JAF38:2116
 INULIN RT RIZ
 IRON 6-360 LF USA USG
 ISOLEUCINE 720-11,594 LF USA
 KAEMPFEROL-GLYCOSIDES PL RIZ
 KAEMPFEROL-3-GLUCOSIDE LF
 JAF38:2116
 KILOCALORIES 170-2,737 LF USA
 BETA-LACTUCEROL LX HHB
 LEAD 4-4.8 LF USG
 LEUCINE 980-15,781 LF USA
 LINOLEIC-ACID 750-12,077 LF USA
 ALPHA-LINOLENIC-ACID 130-2,093 LF
 USA
 LITHIUM 0.8-0.96 LF USG
 LYSINE 630-10,145 LF USA
 MAGNESIUM 95-2,400 LF USA USG
 MANGANESE 4-72 LF USA USG
 MERCURY 0.002-0.0024 LF USG
 METHIONINE 140-2,254 LF USA
 MOLYBDENUM 1.4-1.68 LF USG
 MUFA 40-644 LF USA
 MYRISTIC-ACID 30-483 LF USA
 NIACIN 4-64 LF USA
 NICKEL 2-2.4 LF USG
 OLEIC-ACID 40-644 LF USA
 PALMITIC-ACID 410-6,602 LF USA
 PANTOTHENIC-ACID 9-145 LF USA
 PHENOLICS 32,000 LF JAF38:2116

PHENYLALANINE 530-8,535 LF USA
 PHOSPHORUS 242-5,760 LF USA USG
 POTASSIUM 2,915-96,000 LF USG 1/
 PROLINE 590-9,500 LF USA
 PROTEIN 12,000-209,300 LF USA
 PUFA 870-14,010 LF USA
 QUERCETIN LF JAF38:2116
 RIBOFLAVIN 0.7-13 LF USA
 SELENIUM 0.008-0.024 LF USG
 SERINE 490-7,890 LF USA
 SFA 480-7,729 LF USA
 SILVER 0.2-0.24 LF USG
 SODIUM 179-4,560 LF USG
 STEARIC-ACID 20-322 LF USA
 STRONTIUM 140-240 SH USG
 SULFUR 740-912 SH USG
 TARAXASTEROL LX HHB
 THIAMIN 0.7-14 LF USA
 THREONINE 500-8,051 LF USA
 TITANIUM 1-1.2 LF USG
 TRYPTOPHAN 50-805 LF USA
 TYROSINE 400-6,441 LF USA
 VALINE 630-10,145 LF USA
 VIT-B6 0.2-3.2 LF USA
 WATER 934,000-943,800 LF USG WOI
 ZINC 8-146 LF USA USG
 ZIRCONIUM 4-4.8 LF USG

CICHORIUM INTYBUS L.

“CHICORY; WITLOOF”

ACETOPHENONE RT 411/
 ARGININE 730-14,892 LF USA
 ASCORBIC-ACID 100-2,040 LF USA
 ASCORBIC-ACID 50-250 RT USA
 ASH 8,900-44,500 RT USA
 ASH 6,000-180,000 LF USA
 BETAINE RT WOI
 BORON 20 RT BOB
 CAFFEIC-ACID 767 LF? CRC(FSN)
 CALCIUM 410-2,050 RT USA
 CALCIUM 790-18,900 LF CRC
 CARBOHYDRATES 32,000-654,000 LF
 CRC USA
 CARBOHYDRATES 175,100-875,500 RT
 USA
 BETA-CAROTENE 0-228 LF CRC
 CELLULOSE RT WOI
 CHOLINE RT HHB
 CICHORIC-ACID LF HHB
 CICHORIIN 1,000-2,000 FL HHB
 8-DEOXYLACTUCIN RT JAF38:1037
 (BITTER 1.1 PPM)

11(S),13-DIHYDRO-8-DEOXYLACTUCIN
 RT JAF38:1037 (BITTER 1.1 PPM)
 11(S),13-DIHYDROLACTUCIN RT
 JAF38:1037 (BITTER 1.4 PPM)
 11(S),13-DIHYDROLACTUCOPICRIN RT
 JAF38:1037 (BITTER 0.2 PPM)
 ESCULETIN FL RIZ
 ESCULIN FL RIZ
 EX RT ANTIARRHYTHMIC AYL
 FAT 1,000-29,000 LF USA
 FAT 2,000-10,000 RT USA
 FERULIC-ACID <0.5 LF? CRC(FSN)
 FIBER 19,500-97,500 RT USA
 FIBER 9,000-153,000 PL CRC
 FRUCTOSE 45,000-220,000 RT HHB 37/
 GLUCOSE 11,000 RT WOJ
 HARMAN RT 411/
 HISTIDINE 170-3,468 LF USA
 P-HYDROXY-BENZOIC-ACID 11 LF?
 CRC(FSN)
 INOSITOL RT HHB
 INULIN 110,000-580,000 RT HHB
 IRON 5-246 LF USA
 IRON 8-40 RT USA
 ISOLEUCINE 600-12,240 LF USA
 JACQUINELIN RT JAF38:1037
 KAEMPFEROL PL JLS58:163
 LACTUCIN LX HHB (BITTER 1.7 PPM)
 LACTUCIN-P-
 OXYPHENYLACETICACID-ESTER
 RT HHB
 LACTUCOPICRIN RT AYL (BITTER 0.5
 PPM)
 LEUCINE 440-8,976 LF USA
 LINOLEIC-ACID 370-7,548 LF USA
 LINOLEIC-ACID 750-3,750 RT USA
 ALPHA-LINOLENIC-ACID 130-650 RT
 USA
 ALPHA-LINOLENIC-ACID 60-1,224 LF
 USA
 LYSINE 390-7,956 LF USA
 MAGNESIUM 220-1,100 RT USA
 MAGNESIUM 130-2,652 LF USA
 MANNAN RT HHB
 MANNITOL
 MANNOSE RT AYL
 METHIONINE 60-1,224 LF USA
 MYRISTIC-ACID 30-150 RT USA
 MYRISTIC-ACID 10-204 LF USA
 NIACIN 5-102 LF USA
 NIACIN 4-20 RT USA
 NORHARMAN RT 411/
 OLEIC-ACID 40-200 RT USA
 OLEIC-ACID 20-408 LF USA

PALMITIC-ACID 410-2,050 RT USA
 PALMITIC-ACID 210-4,284 LF USA
 PALMITOLEIC-ACID 750-3,750 RT USA
 PECTIN RT HHB
 PENTOSANE 47,000-65,000 RT HHB
 PHENYLALANINE 240-4,896 LF USA
 PHOSPHORUS 610-3,050 RT USA
 PHOSPHORUS 210-4,284 LF USA
 POTASSIUM 1,820-37,128 LF USA
 POTASSIUM 2,900-14,500 RT USA
 PROTEIN 14,000-70,000 RT USA
 PROTEIN 10,000-246,000 LF USA
 PROTOCATECHUIC-ALDEHYDE SD
 HHB
 QUERCETIN PL JLS58:163
 KAEMPFEROL PL JLS58:163
 RIBOFLAVIN 1-29 LF USA
 RIBOFLAVIN 0-2 RT USA
 SCOPOLETIN FL RIZ
 SINAPIC-ACID <0.5 CRC(FSN)
 SODIUM 500-2,500 RT USA
 SODIUM 70-1,428 LF USA
 STEARIC-ACID 10-204 LF USA
 STEARIC-ACID 20-100 RT USA
 TANNIN PL 37/
 TARAXASTEROL RT HHB
 THIAMIN 0-2 RT USA
 THIAMIN 1-14 LF USA
 THREONINE 280-5,712 LF USA
 TRYPTOPHAN 180-3,672 LF USA
 UMBELLIFERONE FL RIZ
 VALINE 450-9,180 LF USA
 VANILLIC-ACID 0.5 LF? CRC(FSN)
 WATER 777,000-800,000 RT USA WOJ
 WATER 931,000-951,000 LF USA

CICUTA MACULATA L.

“WATER HEMLOCK”

CICUTINE PL CRC
 FAT 159,000 SD CRC

CIMICIFUGA DAHURICA
 (TURCZ.) MAXIM.

“SHENG MA”

24-O-ACETYLSODAHURINOL RH CCO
 CAFFEIC-ACID RH CCO
 CALCIUM 9,750 RH SMO
 CIMIGENOL RH CCO
 CIMIGENOL-XYLOSIDE RH CCO
 COPPER 8 RH SMO
 DAHURINOL RH CCO

FERULIC-ACID RH CCO
 12-HYDROXYCIMIGENOL RH CCO
 12-HYDROXYCIMIGENOL-XYLOSIDE
 RH CCO
 IRON 680 RH SMO
 ISODAHURINOL RH CCO
 ISOFERULIC-ACID RH CCO
 MAGNESIUM 1,450 RH SMO
 MANGANESE 74 RH SMO
 3-(3'-METHYL-2'-BUTENYLIDEN)-2-
 INDOLINONE RH CCO
 NORVISNAGIN RH CCO
 PHENOL-CARBOXYLIC-ACID RH CCO
 POTASSIUM 18,600 RH SMO
 SODIUM 85 RH SMO
 VISAMMINOL RH CCO
 VISNAGIN RH CCO
 ZINC 18 RH SMO

CIMICIFUGA RACEMOSA (L.)
 NUTT.

“BLACK-COHOSH”

ACETIC-ACID
 ACTEIN PL PED
 ALUMINUM 226 RT PED
 ASCORBIC-ACID 21 RT PED
 BUTYRIC-ACID
 CALCIUM 5,970 RT PED
 CARBOHYDRATES 813,000 RT PED
 BETA-CAROTENE 2.4 RT PED
 CHROMIUM 18 RT PED
 CIMICIFUGIN 150,000-200,000 RT
 CIMIGENOL-XYLOSIDE RH CCO
 CIMIGOSIDE PL PED
 COBALT 38 RT PED
 27-DESOXYACETYLLACTEOL
 EO 1,000-4,000 PL PED
 FAT 15,000 RT PED
 FAT 326,000-451,000 SD
 FIBER 119,000 RT PED
 FORMIC-ACID
 FORMONONETIN RT 411/
 GALLIC-ACID PL PED
 IRON 380 RT PED
 ISOFERULIC-ACID PL PED
 KILOCALORIES 3,200 RT PED
 MAGNESIUM 1,740 RT PED
 MANGANESE 14 RT PED
 N-METHYLCYTISINE
 NIACIN 31.5 RT PED
 OLEIC-ACID
 PALMITIC-ACID

PHOSPHORUS 2,080 RT PED
 POTASSIUM 10,300 RT PED
 PROTEIN 82,000 RT PED
 PROTEIN 162,000-238,000 SD FNF
 RACEMOSIDE RT 411/
 RESIN RT
 RIBOFLAVIN 0.65 RT PED
 SALICYLIC-ACID PL PED
 SELENIUM 32 RT PED
 SILICON 27 RT PED
 STARCH PL PED
 TANNIC-ACID
 TANNIN RT 411/
 THIAMIN 58 RT PED
 TIN TR RT PED
 WATER 790,000 RTR PED
 ZINC TR RT PED

CINCHONA SPP

“QUININE”

ALKALOIDS 60,000-160,000 BK CRC
 ALKALOIDS 10,000 LF WOI
 ARICINE USD
 ASH 60,000 SD CRC
 CAFFEIC-ACID BK CCO
 CINCHOFULVIC-ACID USD
 CINCHOLIC-ACID-BETA-D-
 QUINOVOSIDE BK CCO
 CINCHONAIN-IA BK CCO
 CINCHONAIN-IB BK CCO
 CINCHONAIN-IC BK CCO
 CINCHONAIN-ID BK CCO
 CINCHONAIN-IIA BK CCO
 CINCHONAIN-IIB BK CCO
 CINCHONIDINE BK AYL
 CINCHONINE BK AYL
 CINCHOPHYLLAMINE PL JSG
 CINCHOTANNIC-ACID USD
 CINCHOTINE WOI
 CONQUINAMINE BK WOI
 CUSCAMIDINE BK WOI
 CUSCAMINE BK WOI
 CUSCONIDINE BK WOI
 CUSCONINE BK WOI
 DICINCHONINE BK WOI
 DICONQUININE BK WOI
 DIHYDROQUINIDINE PL JSG
 (-)-EPICATECHIN BK CCO
 EPIQUINAMINE BK AYL
 EPIQUINIDINE USD
 EPIQUININE BK AYL
 FAT 5,000-160,000 SD CRC WOI
 HYDROCINCHONIDINE USD

HOMOCINCHONINE USD
 HYDROQUINIDINE BK AYL
 HYDROQUININE BK AYL
 ISOCINCHOPHYLLAMINE PL JSG
 JAVANINE BK WOI
 PARICINE WOI
 PROANTHOCYANIDIN-A-2 BK CCO
 PROCYANIDIN-B-5 BK CCO
 PROCYANIDIN-C-1
 PROTEIN 180,000 SD CRC
 QUINACIMINE USD
 QUINAMINE BK WOI
 QUINIC-ACID BK AYL
 QUINICINE BK WOI
 QUININIDINE BK AYL
 QUININE BK AYL
 QUINOVIC-ACID-BETA-D-
 QUINOVOSIDE BK CCO
 QUINOVIN BK AYL
 RESIN BK AYL
 STARCH BK AYL
 SUCIRUBINE PL JSG
 WAX BK AYL

CINNAMOMUM AROMATICUM
 NEES

“CASSIA”

ACETOEUGENOL
 2-HYDRO-ACETOPHENONE
 4-ALLYL-PHENOL
 ANHYDROCINNZEYLANINE
 ANHYDROCINNZEYLANOL
 O-ANISALDEHYDE
 ASCORBIC-ACID 309 BK CRC
 BARIUM 140 BK CPB38:709
 BENZALDEHYDE BK GEO
 BENZOIC-ACID BK GEO
 BENZYL-BENZOATE
 BROMINE 10 BK CPB38:709
 CALCIUM 4,900-13,569 BK CRC SMO
 CALCIUM-OXALATE
 CAMPHENE
 CARBOHYDRATES 798,000-914,000 BK
 CRC
 BETA-CAROTENE 1-2 BK CRC
 (+)-CATECHIN BK 411/
 CHAVICOL
 CHLORINE 70 BK CPB38:709
 CHROMIUM 1 BK CPB38:709
 CINCASSIOL-A
 CINCASSIOL-B
 CINCASSIOL-C-1

CINCASSIOL-C-2
 CINCASSIOL-C-3
 CINCASSIOL-D-1
 CINCASSIOL-D-2
 CINCASSIOL-D-3
 CINCASSIOL-D-4
 1,8-CINEOLE
 TRANS-CINNAMALDEHYDE
 CINNAMALDEHYDE 1,400-1,900 BK
 GEO
 CIS-CINNAMIC-ACID BK GEO
 TRANS-CINNAMIC-ACID
 CINNAMTANNINS PL JSG
 CINNAMYL-ACETATE
 CINNAMYL-ALCOHOL
 CINCASSIOL-A
 CINCASSIOL-B
 CINCASSIOL-C-1
 CINCASSIOL-C-2
 CINCASSIOL-C-3
 CINCASSIOL-D-1
 CINCASSIOL-D-2
 CINCASSIOL-D-3
 CINCASSIOL-D-4
 CINNZEYLANINE
 CINNZEYLANOL
 COPPER 2-10 BK CAL SMO USA
 CPB38:709
 COUMARIN BK AYL
 CRESOL
 CUMINALDEHYDE
 P-CYMENE
 DECANOIC-ACID
 DIHYDROCINNAMIC-ACID
 EO 2,000 BK GEO
 EO 3,100-7,700 LF GEO
 (-)-EPICATECHIN BK 411/
 ETHYL-CINNAMATE
 ETHYL-GUAIACOL
 4-ETHYL-GUAIACOL
 EUGENOL
 FARNESOL
 FAT 35,000 BK CRC
 FENCHONE
 FIBER 270,000 BK CRC
 FURFURAL
 GERANIAL
 GUAIACOL
 HEPTANOIC-ACID
 HEXANOIC-ACID
 HEXANOL
 HEX-3-EN-1-OL
 HUMULENE
 HYDROCINNAMALDEHYDE

IODINE 1 BK CPB38:709
 IRON 25-421 BK CAL CRC
 ISOEUGENOL
 LINALOOL
 MAGNESIUM 770 1,680 BK CAL SMO
 MANGANESE 167-600 BK CAL SMO
 USA CPB38:709
 MERCURY 60 PPM BL CAL
 TRANS-2-METHOXY-
 CINNAMALDEHYDE
 TRANS-2-METHOXY-CINNAMIC-ACID
 CIS-2-METHOXY-DIHYDROCINNAMIC-
 ACID
 2-METHYL-BENZALDEHYDE
 METHYL-BENZOATE
 2-METHYL-BUTYRIC-ACID
 3-METHYL-BUTYRIC-ACID
 METHYL-CHAVICOL
 METHYL-CINNAMATE
 METHYL-O-CUMARALDEHYDE BK
 GEO
 METHYL-EUGENOL BK 411/
 METHYL-FURFURYL
 METHYL-OCTANOATE
 METHYL-SALICYLATE
 METHYL-SALICYALDEHYDE BK GEO
 19-MONOACETYL-CINCASSOL-A
 NONANAL
 NONANOIC-ACID
 OCTANOIC-ACID
 PHENOL
 PHENYLETHYL-ACETATE
 PHENYLETHYL-ALCOHOL
 PHENYLPROPYL-ACETATE
 3-PHENYLPROPYL-ACETATE
 PROCYANIDINS PL JSG
 PHOSPHORUS 1,000 BK CPB38:709
 ALPHA-PINENE
 BETA-PINENE
 POTASSIUM 3,020-15,500 BK CAL CRC
 SMO
 PROTEIN 43,000 BK CRC
 RIBOFLAVIN 1-2 BK CRC
 RUBIDIUM 30 BK CPB38:709
 SABINENE
 SAFROLE
 SALICYALDEHYDE BK 411/
 SALICYLIC-ACID
 BETA-SELINENE
 SODIUM 42-287 BK CRC SMO
 STRONTIUM 50 BK CPB38:709
 STYRENE
 SULFUR 1,200 BK CPB38:709
 TANNIN

TERPINEN-4-OL
 ALPHA-TERPINENE
 GAMMA-TERPINENE
 ALPHA-TERPINEOL
 TERPINOLENE
 THIAMIN 1 BK CRC
 TITANIUM 50 BK CPB38:709
 2-VINYLPHENOL
 ZINC 4-10 BK CAL SMO CPB38:709

CINNAMOMUM BURMANNII
 (NEES) BLUME

"JAVA CINNAMON"
 "PADANG CASSIA"

ARSENIC ND BK CPB38:709
 BARIUM 50 BK CPB38:709
 BROMINE 20 BK CPB38:709
 CALCIUM 17,000 BK CPB38:709
 CHLORINE 200 BK CPB38:709
 CHROMIUM 2T BK CPB38:709
 COPPER 5 BK CPB38:709
 IODINE ND BK CPB38:709
 IRON 100 BK CPB38:709
 LEAD ND BK CPB38:709
 MANGANESE 170 BK CPB38:709
 MOLYBDENUM ND BK CPB38:709
 NICKEL ND BK CPB38:709
 PHOSPHORUS 1,600 BK CPB38:709
 POTASSIUM 6,000 BK CPB38:709
 RUBIDIUM 20 BK CPB38:709
 STRONTIUM 60 BK CPB38:709
 SULFUR 1,000 BK CPB38:709
 TITANIUM 30 BK CPB38:709
 ZINC 10 BK CPB38:709

CINNAMOMUM CAMPHORA (L.)
 NEES & EBERM.

"HO LEAF"

ACETALDEHYDE
 ACETIC-ACID
 AZULENE
 BISABOLENE
 ALPHA-BISABOLOL
 BETA-BISABOLOL
 BORNEOL 0-290 LF BML
 CADINADIENE
 CADINENE
 CADINENOL
 CADINEOL EO BML
 T-CADINOL
 CAFFEIC-ACID PL JLS58:124

ALPHA-CALACORENE	GERANIAL LF BML
CAMPESTEROL-GLUCOSIDE	GERANIOL LF BML
CAMPHAZULENE	GERANYL-ACETATE 0-600 LF BML
(+)-CAMPHENE PL JSG	GUAJAZULENE
(-)-CAMPHENE PL JSG	HELIOTROPIN WD 411/
CAMPHERENOL PL JSG	ALPHA-HEXANAL
CAMPHERENONE	BETA-HEXANAL
CAMPHOR 96-220,000 LF BML	N-HEXANOL
CAMPHORACENE	CIS-3-HEXENOL
CAMPHORENE	N-HEXYLALDEHYDE
CAMPHORENONE PL JSG	HINOKIN PL JSG
CAPRINALDEHYDE	HOTRIENOL
CAPRONALDEHYDE	HUMULENE
CAPROIC-ACID	ISOBUTYRIC-ACID
CAPRYLIC-ACID EO CRC	ISOVALERALDEHYDE
CARVACROL	JUNENOL EO BML
CARYOPHYLLENE LF BML	KAEMPFEROL PL JLS58:124
1,8-CINEOLE 24-48 LF BML	KUSUNOKININ PL JSG
CINNAMONOL PL JSG	KUSUNOKIOL WD 411/
CITRONELLIC-ACID EO CRC	KUSUNOL
CITRONELLOL	LAURIC-ACID
CRESOL	LAURIN
CUBENOL EO BML	LAUROLITSIN RT CRC
CUMINALCOHOL EO CRC	LEUCOCYANIDIN CRC
CUMINALDEHYDE	LIMONENE 48-120 LF BML
CYANIDIN PL JLS58:124	LINALOOL 5,520-22,800
P-CYMENE 24 LF BML	(-)-LINALOOL
P-CYMOL EO CRC	CIS-LINALOOL-OXIDE
DIHYDROCUMINYL-ALCOHOL	TRANS-LINALOOL-OXIDE LF BML
DIHYDROEUGENOL	LINALYL-ACETATE 48-14,400 LF BML
DIMETHYLMATAIRESINOL PL JSG	MESITYLOXIDE LF BML
3,7-DIMETHYLOCTA-1,7-DIEN-3,6-DIOL LF BML	METHYL-EUGENOL
3,7-DIMETHYLOCTA-1,5-DIEN-3,7-DIOL LF BML	METHYL-FURFURYL
3,5-DIMETHYL-4,6-DI-O-	METHYL-ISOBUTYL-KETONE
METHYLPHLORACETOPHENONE	METHYL-VINYL-KETONE
DIMETHYLSECOISOLARICIRESINOL PL JSG	T-MUUROLOL EO BML
DIPENTENE EO CRC	MYRCENE 48-96 LF BML
5-DODECANYL-4-HYDROXY-4-	MYRISTIC-ACID
METHYL-2-CYCLOPENTENONE	MYRISTINALDEHYDE
BETA-ELEMENE LF BML	NERAL LF BML
N-ENANTHIC-ACID	NEROL LF BML
EPICAMPHERONOL PL JSG	NEROLIDOL EO BML
EPICUBENOL EO BML	NERYL-ACETATE 0-528 LF BML
ETHYLGUAIACOL EO CRC	CIS-OCIMENE 24 LF BML
ETHYL-PHENOL	TRANS-OCIMENE 24 LF BML
EUGENOL	ORTHODENE
FAT 420,000 SD CRC	PENTENYLALDEHYDE
FENCHENE	PELLANDRENE
FIBER	ALPHA-PINENE
FORMIC-ACID	BETA-PINENE
FURFURAL	PIPERITONE
	PIPERONAL EO HHB
	PIPERONYLACROLEIN EO HHB
	PIPERONYLIC-ACID

PROPIONIC-ACID
 PROPIONALDEHYDE
 PROPYL-PYROCATECHOL
 QUERCETIN PL JLS58:124
 RETICULENE
 SAFROLE LF BML
 SALVENE
 SECOISOSOLARICIREBINOL-DIM-
 ETHYL-ETHER WD 411/
 BETA-SELINENE LF BML
 STEARINALDEHYDE EO CRC
 SUVENOL EO CRC
 TERPINEN-1-OL
 ALPHA-TERPINENE 24 LF BML
 TERPINEN-4-OL LF BML
 ALPHA-TERPINEOL 1-72 LF BML
 TERPINOLENE 24 LF BML
 ALPHA-TERPINYL-ACETATE 0-72 LF
 BML
 TRAGETONOL
 CIS-2,6,6-TRIMETHYL-2-VINYL-5-
 HDROXYTETRAHYDROFURAN
 VANILLIN WD 411/

CINNAMOMUM SIEBOLDII

“JAPANESE CINNAMON”

BARIUM 80 RT BK CPB38:709
 BARIUM 55 BK CPB38:709
 BROMINE ND BK CPB38:709
 BROMINE 5 RT BK CPB38:709
 CALCIUM 14,000 BK CPB38:709
 CALCIUM 9,000 RT BK CPB38:709
 (+)-CATECHIN PL JSG
 CHLORINE 200 BK CPB38:709
 CHLORINE 300 RT BK CPB38:709
 CHROMIUM 3 RT BK CPB38:709
 CHROMIUM 2 RT BK CPB38:709
 COPPER 7 BK CPB38:709
 COPPER 9 RT BK CPB38:709
 (-)-EPICATECHIN PL JSG
 IODINE ND BK CPB38:709
 IODINE 4 RT BK CPB38:709
 IRON 500 RT BK CPB38:709
 IRON 200 RT BK CPB38:709
 LEAD 8 BK CPB38:709
 LEAD 9 RT BK CPB38:709
 MANGANESE 360 BK CPB38:709
 MANGANESE 220 RT BK CPB38:709
 PHOSPHORUS 1,500 BK CPB38:709
 PHOSPHORUS 800 RT BK CPB38:709
 POTASSIUM 6,000 BK CPB38:709
 POTASSIUM 7,000 RT BK CPB38:709
 PROANTHOCYANIDINS PL JSG

RUBIDIUM 3 BK CPB38:709
 RUBIDIUM 9 RT BK CPB38:709
 STRONTIUM 80 BK CPB38:709
 STRONTIUM 70 RT BK CPB38:709
 SULFUR 900 BK CPB38:709
 SULFUR 800 RT BK CPB38:709
 TITANIUM 30 BK CPB38:709
 TITANIUM 60 RT BK CPB38:709
 ZINC 40 BK CPB38:709
 ZINC 20 RT BK CPB38:709

CINNAMOMUM VERUM J. S. PRESL

“CINNAMON”

ACETOEUGENOL 16-64 BK BML
 ASCORBIC-ACID 309 CRC
 BARIUM 60 BK CPB38:709;
 BENZALDEHYDE 26-104
 BENZYL-ALCOHOL BK BML
 BENZYL-BENZOATE 66-400 BK BML
 BORNEOL 2-8 BK BML
 BORNYL-ACETATE 10-20 BK BML
 BORON 7-15 BK BOB
 BROMINE 10 BK CPB38:709
 CALCIUM 5,329-6,000 BK CRC
 CPB38:709
 CALCIUM-OXALATE
 CAMPHENE 18-72 BK BML
 CAMPHOR
 DELTA-3-CARENE 3-12 BK BML
 CARBOHYDRATES
 BETA-CAROTENE 1-2 BK CRC
 CARYOPHYLLENE 135-1,316 BK BML
 CARYOPHYLLENE-OXIDE
 CHLORINE 300 BK CPB38:709
 CHROMIUM 14.4 LF ABS 5/
 CHROMIUM 2-10 BK ABS 5/ CPB38:709
 1,8-CINEOLE 165-800 BK BML
 CINNAMALDEHYDE 6,000-30,000 BK
 BML
 TRANS-CINNAMIC-ACID
 CINNAMYL-ACETATE 510-2,040 BK
 BML
 CINNAMYL-ALCOHOL 26-104 BK BML
 CINNZEYLANINE BK BML
 CINNZEYLANOL BK BML
 CINNZEYLANOL-1-ACETATE PL JSG
 COBALT 0.6 BK ABS 5/
 COBALT 1.1 LF ABS 5/
 CONIFERALDEHYDE
 COPPER 4.9-9 BK ABS 5/ CPB38:709
 COPPER 10.9 LF ABS 5/

COUMARIN BK 411/
 CUMENE 66-264 BK BML
 CUMINALDEHYDE 4-100 BK BML
 P-CYME NE 55-448 BK BML
 DIHYDROFUMIGATIN BK BML
 EO 40,000 BK 411/
 ETHYL-CINNAMATE
 EUGENOL 220-3,520 BK 411
 EUGENOL-ACETATE
 FARNESOL 3-12 BK BML
 FAT 14,000 BK CRC
 FENCHONE
 FIBER 270,000 BK CRC
 FURFURAL 3-12 BM BML
 FURFUROL BK BML
 GERANIAL BK BML
 GERANIOL 6-24 BK BML
 GERANYL-ACETATE BK BML
 GUM BK BML
 HEXANOL
 HUMULENE 20-124 BK BML
 HYDROCINNAMALDEHYDE 40-160 BK
 BML
 IODINE 3 BK CPB38:709
 IRON 60-421 BK CRC ABS 5/ CPB38:709
 ISOCARYOPHYLLENE BK BML
 ISOEUGENOL 2-8 BK BML
 LEAD ND BK CPB38:709
 LIMONENE 46-184 BK BML
 LINALOOL 230-956 BK BML
 TRANS-LINALOOL-OXIDE 5-20 BK BML
 LINALYL-ACETATE BK BML
 MANGANESE 66-140 BK ABS 5/
 CPB38:709
 MANGANESE 101.6 LF ABS 5/
 MANNITOL
 METHYL-N-AMYLKETONE
 METHYL-CHAVICOL
 METHYL-CINNAMATE
 METHYL-EUGENOL BK 411/
 METHYL-VINYL-KETONE BK BML
 MUCILAGE 20,000-37,000 BK BML HHB
 MYRCENE 5-20 BK BML
 NEROL
 NIACIN 8 BK CRC
 NICKEL 1.1 BK ABS 5/
 NICKEL 4.2 LF ABS 5/
 NONYLALDEHYDE BK BML
 CIS-OCIMENE 3-12 BK BML
 TRANS-OCIMENE
 PELARGONALDEHYDE BK BML
 PHELLANDRENE 63-252 BK BML
 PHENOL
 2-PHENYLACETALDEHYDE

PHENYLETHYL-ACETATE 7-28 BK BML
 PHENYLETHYL-ALCOHOL 41-164 BK
 BML
 2-PHENYLETHYL-BENZOATE BK BML
 3-PHENYLPROPYL-ACETATE 13-52 BK
 BML
 PHENYLPROPYL-ACETATE
 PHOSPHORUS 674-1,100 BK CRC
 CPB38:709
 ALPHA-PINENE 20-236 BK BML
 BETA-PINENE 14-76 BK BML
 PIPERITONE 7-28
 POTASSIUM 5,525-6,000 BK CRC
 CPB38:709
 PROTEIN 35,000-43,000 BK CRC
 RIBOFLAVIN 1 BK CRC
 RUBIDIUM 20 BK CPB38:709
 SABINENE 2-8 BK BML
 SACCHAROSE
 SAFROLE
 BETA-SELINENE
 SODIUM 287 BK CRC
 STRONTIUM 80 BK CPB38:709
 SULFUR 1,900 BK CPB38:709
 TANNIN
 TERPINEN-4-OL 36-144 BK BML
 ALPHA-TERPINENE 42-168
 GAMMA-TERPINENE 3-12 BK BML
 ALPHA-TERPINEOL 40-264 BK BML
 GAMMA-TERPINEOL BK BML
 TERPINOLENE 11-44 BK BML
 THIAMIN 1 BK CRC
 TITANIUM 40 BK CPB38:709
 VANILLIN
 2-VINYLPHENOL 3-12 BK BML
 ALPHA-YLANGENE 31-124 BK BML
 GAMMA-YLANGENE BK BML
 ZINC 11.4-20 BK ABS 5/ CPB38:709
 ZINC 34 LF ABS 5/

5/ Khan, Bibi & Zia. 1985. Pak. J. Sci. Ind.
 Res. 28: 234

CISSAMPELOS PAREIRA L.

“PAREIRA”

“BUTUA”

“FALSE PAREIRA”

ALKALOIDS 7,200-18,000 RT HHB 400/
 BEBEERINE 4,000-5,000 RT HHB WOI
 400/
 CISSAMINE RT HHB
 CISSAMPAREINE RT HHB
 (+)-CURINE RT HHB

(++)-CURINE-4"-METHYL-ETHER PL JSG
 CYCLANOLINE PL JSG
 CYCLEANINE RT 400/
 EO 2,000 RT HHB
 HAYATIDINE RT HHB
 HAYATINE 50-2,500 RT HHB 400/
 HAYATININE RT HHB
 ISOCHONDODENDRINE RT HHB
 MENISMINE RT HHB
 4-O-METHYLCURINE RT HHB
 PARIERINE RT HHB
 PELOSINE 5,000 RT WO
 QUERCITOL RT 400/
 D-QUERCITOL RT 400/
 SAPONIN RT WO
 TETRANDRINE PL JSG
 TETRANDRINE-N-2'-OXIDE PL JSG

CISTANCHE SALSA (C.A.MEYER)
 G. BECK

“BROOMRAPE; CISTANCHIS
 HERBA 1/
 JOU TSUNG JUNG”

CALCIUM 1,730 PL CAL
 COPPER 8 PL CAL
 IRON 60 PL CAL
 MAGNESIUM 810 PL CAL
 MANGANESE 20 PL CAL
 MERCURY 0.08 PL CAL
 PALLIDOL PL JSG
 POTASSIUM 17,100 PL CAL
 SODIUM 1,970 PL CAL
 ZINC 13 PL CAL

1/ *Cistanche salsa* cited first by CCO as
Cistanchis herba, name under which
 mineral data (CAL) were cited.

CISTUS LADANIFERUS L.

“LABDANUM; ROCKROSE;
 AMBREINE; GUM CISTUS”

8-ABIETEN-18-OIC-ACID PL JSG
 ACETOPHENONE 17-1,190 LF AYL BML
 6BETA-8-ACETOXY-7-OXO-8-LABDEN-
 15-OIC-ACID PL JSG
 ALDEHYDES 10-70 LF GEO
 AMBREINOLIDE PL JSG
 ANISIC-ACID RE HHB
 ARACHIDIC-ACID RE HHB
 BEHENIC-ACID RE AYL

BENZALDEHYDE 28-1,960 LF BML
 HHB
 BORNEOL 24-1,680 LF BML HHB
 BORNYL-ACETATE 32-2,240 LF AYL
 BML
 CAMPHENE 11-770 LF BML HHB
 CINEOLE LF HHB
 1,8-CINEOLE 2-140 EO BML
 CIS-CITRAL EO AYL
 TRANS-CITRAL EO AYL
 P-CYMENE 16-1,120 LF BML HHB
 DEHYDROABIETINIC-ACID-METHYL-
 ESTER RE HHB
 DIACETYL LF HHB
 DIHYDROCINNAMIC-ACID RE HHB
 DIHYDROPALUSTRIC-ACID PL JSG
 EO 1,000-70,000 EO GEO HHB
 8-EPI-NORAMBREINOLIDE PL JSG
 EUGENOL 15-1,050 LF HHB
 FENCHENE LF HHB
 FENCHONE 10-770 EO AYL BML
 FURFURAL LF GEO
 FURFUROL LF HHB
 GERANIAL 27-1,090 LF BML
 GERANIOL 17-1,190 LF BML
 GERANYL-ACETATE 6-420 LF AYL
 BML
 HENTRIACONTANE PL JSG
 CIS-3-HEXEN-1-OL 68-4,760 LF AYL
 BML
 TRANS-2-HEXEN-1-OL 45-3,150 LF AYL
 BML
 15-HYDROXY-7-LABDEN-6-ONE RE
 AYL
 DELTA-13,14-ISOHYDROABIETINIC-
 ACID-METHYL-ESTER RE HHB
 ISOMENTHONE 23-1,610 LF AYL BML
 LABD-8(17)-EN-15-OL RE AYL
 LABDANDIOL RE HHB
 LABDANE-8-ALPHA-15-DIOL RE AYL
 LABDANE-8-ALPHA,15,19-ALPHA-TRIOL
 RE AYL
 LABDANOLIC-ACID RE AYL
 LABDANTRIOL RE HHB
 LEDOL LF HHB
 LIMONENE 17-1,190 LF AYL BML
 LINALOOL 4-280 LF AYL BML
 MYRCENE 3-210 LF AYL BML
 NEROL 22-1,540 LF AYL BML
 NONACOSANE PL JSG
 12-NORAMBREINOLIDE PL JSG
 15-NOR-8-LABDANOL RE AYL
 6-OXO-CATIVIC-ACID RE AYL
 PARAFFIN RE HHB

ALPHA-PHELLANDRENE 3-210 PL AYL
BML
BETA-PHELLANDRENE 2-140 PL BML
PHENOLS 10-700 LF GEO
ALPHA-PINENE 40-31,500 LF BML GEO
HHB
BETA-PINENE 6-420 LF BML HHB
SABINENE 10-700 LF AYL BML
TERPINEN-4-OL 1-70 LF AYL BML
ALPHA-TERPINENE 2-140 LF AYL BML
BETA-TERPINENE 2-140 LF AYL BML
GAMMA-TERPINENE 2-140 LF AYL
BML
ALPHA-TERPINEOL 24-1,680 LF AYL
BML
ALPHA-THUJONE 8-560 LF AYL BML
1,5,5-TRIMETHYLCYCLOHEXANONE
EO GEO
2,2,6-TRIMETHYLCYCLOHEXANONE
48-3,360 LF AYL BML
VIRIDIFLOROL RE AYL

CITRULLUS COLOCYNTHIS

"COLOCYNTH"

ALPHA-AMYRIN SD CCO
ANETHOLE PE RIZ
ANISALDEHYDE PE RIZ
ARACHIDIC-ACID SD HHB
ASCORBIC-ACID 122 FR WBB
ASPARAGININE FL RIZ
BENZYL-ALCOHOL PE RIZ
CAFFEIC-ACID FR HHB
CAPRIC-ACID PE RIZ
CHLOROGENIC-ACID FR HHB
CITRAL PE RIZ
CITRONELLAL PL RIZ
CITRONELLOL PL RIZ
CITRULLINE FR HHB
CITRULLOL FR HHB
CITRULLONE PL JSG
COLOCYNTHEIN PL RIZ
COLOCYNTHIN PL JSG
COLOSIDE-A FR MPI
M-COUMARIC-ACID FR HHB
CUCURBITACIN-B FR CCO
CUCURBITACIN-E FR CCO
CUCURBITACIN-E-2-D-
GLUCOPYRANOSIDE FR HHB
CUCURBITACIN-J-GLUCOSIDE FR HHB
CUCURBITACIN-L FR CCO
CUCURBITACIN-L-GLYCOSIDE FR HHB
P-CYME NE PE RIZ
DECANOIC-ACID PE RIZ

DIHYDROELATERICIN-B FR HHB
10,13-DIMETHYLPENTA-13-DECEN-1-AL
PE RIZ
DOCOSANYL-ACETATE PE RIZ
ALPHA-ELATERIN FR HHB
ALPHA-ELATERIN-2-D-
GLUCOPYRANOSIDE 2,000
FR RIZ
ALPHA-ELATERIN-2-D-
GLUCOPYRANOSIDE 1,500
LF RIZ
ALPHA-ELATERIN-2-D-
GLUCOPYRANOSIDE 800
PE RIZ
ALPHA-ELATERIN-2-D-
GLUCOPYRANOSIDE 490
RT RIZ
ALPHA-ELATERIN-2-D-
GLUCOPYRANOSIDE 1,800 SD RIZ
ALPHA-ELATERIN-2-D-
GLUCOPYRANOSIDE 1,700
ST RIZ
FAT 150,000-510,000 SD HHB RIZ
FERULIC-ACID FR HHB
FRUCTOSE PE RIZ
GADOLEIC-ACID PE RIZ
GERANYL-ACETATE PE RIZ
GLUCOSE FR RIZ
HENTRIACONTANE FR IJC28:183
HEPTACOSAN-1-OL FR HHB
HEPTANOIC-ACID PE RIZ
1,26-HEXACOSANOL FR IJC28:183
HEXADECANOIC-ACID PE RIZ
HEXANOIC-ACID PE RIZ
P-HYDROXYBENZYLMETHYLETHER
FR HHB
LAURIC-ACID PE RIZ
LIMONENE PE RIZ
LINOLEIC-ACID SD CCO
LINOLENIC-ACID PE RIZ
LUTEOLIN-7-O-GLUCOSIDE PL ABS
ALPHA-MANNITOL 6,000 PC WBB
METHYL-EUGENOL PL RIZ
METHYL-HEPTANONE PL RIZ
MYRISTIC-ACID SD CCO
MYRISTOLEIC-ACID SD CCO
N-OCTACOSANOL FR IJC28:183
OCTANOIC-ACID PE RIZ
OLEANOLIC-ACID PL ABS
OLEIC-ACID SD CCO
PALMITIC-ACID SD CCO
PALMITOLEIC-ACID SD CCO
PHENETHYL-ALCOHOL PL RIZ
QUERCITRIN FR HHB

BETA-SITOSTEROL PL ABS
 BETA-SITOSTEROL-D-GLUCOSIDE PL
 ABS
 ALPHA-SPINASTEROL FR HHB
 STEARIC-ACID SD CCO
 STIGMASTA-7,25-DIENE-3BETA-OL SD
 CCO

CITRULLUS LANATUS (THUNB.)
 MATSUM. & NAKAI

“WATERMELON”

ALANINE 2,000 FR LAF
 ALANINE 15,000 SD LAF
 ALPHA-AMINO-BETA-(1-IMIDAZOYL)-
 PROPIONIC-ACID
 ARGININE 6,949 FR LAF
 ARGININE 46,600 SD LAF
 ASH 30,600 FR LAF
 ASH 62,000 SD LAF
 ASPARTIC-ACID 4,594 FR LAF
 ASPARTIC-ACID 25,500 SD LAF
 BORON 1-4 FR BOB
 CALCIUM 100-3,400 FR CRC
 CALCIUM 1,294-1,300 SD CRC LAF
 CAPRIC-ACID 2,200-4,840 SD WOI
 CAPRYLIC-ACID 400-880 SD WOI
 CARBOHYDRATE 38,00-859,000 FR CRC
 CARBOHYDRATE 44,000-48,000 SD CRC
 LAF
 BETA-CAROTENE 2-48 FR CRC
 JAF37:657
 CITRULLIC-ACID
 CITRULLINE 1,627 FR WOI
 CITRULLOL FR HHB
 COPPER 4 FR LAF
 CUCURBITACIN-E FR LF HHB
 CUCURBITOCITRIN SD 42/
 CYSTEINE 236 FR LAF
 CYSTEINE 5,742 SD LAF
 FAT 2,00-89,000 FR CRC
 FAT 200,000-571,000 SD CRC LAF
 FIBER 35,300-257,000 FR CRC LAF
 FIBER 67,000-316,000 SD CRC
 FOLIC-ACID 0.259 FR LAF
 GLOBULIN SD WOI
 GLUTAMIC-ACID 7,420 FR LAF
 GLUTAMIC-ACID 53,000 SD LAF
 L-GLUTAMIC-ACID SD 16/
 GLUTELIN SD WOI
 GLYCINE 1,178 FR LAF
 HENTRIACONTANE FR
 HISTIDINE 707 FR LAF

HISTIDINE 7,018 SD LAF
 HYDROXYPROLINE FR HHB
 IRON 2-143 FR CRC LAF
 IRON 75 SD LAF
 L-(+)-ISOLEUCINE
 ISOLEUCINE 2,238 FR LAF
 ISOLEUCINE 12,100 SD LAF
 KILOCALORIES 3,513 FR LAF
 KILOCALORIES 6,500 SD LAF
 LAURIC-ACID 1,600-3,250 SD WOI
 LEUCINE 2,120 FR LAF
 LEUCINE 21,100 SD LAF
 LINOLEIC-ACID 52,000-210,280 SD WOI
 LUTEIN 0.14-3 FR JAF37:657
 LYCOPENE 45-900 FR JAF37:657
 LYSINE 7,303 FR LAF
 LYSINE 8,932 SD LAF
 MAGNESIUM 1,081-1,500 FR LAF
 MANGANESE 4 FR LAF
 METHIONINE 707 FR LAF
 METHIONINE 5,742 SD LAF
 MYRISTIC-ACID 400-800 SD WOI
 NEOLYCOPENE FR HHB
 NEUROSPORIN FR HHB
 NIACIN 15-27 FR CRC
 CIS,CIS-3,6-NONADIEN-1-OL FR CCO
 N-OCTACOSANOL FR IJC28:183
 OLEIC-ACID 71,000-189,000 SD WOI
 OXYSILVINE SD HHB
 PALMITIC-ACID 15,200-55,000 SD HHB
 WOI
 PANTOTHENIC-ACID 25 FR LAF
 PECTIN FR
 L-(-)-PHENYLALANINE
 PHENYLALANINE 1,767 FR LAF
 PHENYLALANINE 16,600 SD LAF
 PHOSPHORUS 1-2900 FR CRC WOI
 PHOSPHORUS 8,300-14,600 SD CRC LAF
 PHYSETOLIC-ACID
 PHYTOIN FR HHB
 PHYTOFLUIN FR HHB
 PHYTOSTEROLS 236 FR LAF
 POLY-CIS-LYCOPENE FR HHB
 POTASSIUM 13,514-18,000 FR CRC LAF
 PRO-BETA-CAROTENE FR
 PROLINE 2,827 FR LAF
 PROLINE 11,800 SD LAF
 PRONEUROSPORIN FR HHB
 PROTEIN 1,000-100,000 FR CRC WOI
 PROTEIN 198,000-343,000 SD CRC WOI
 L-BETA-(PYRAZOL-1-YL)-ALANINE FR
 SD HHB
 RIBOFLAVIN 2-8 FR CRC LAF
 RIBOFLAVIN 1 SD CRC

SERINE 1,885 FR LAF
 SERINE 13,700 SD LAF
 SODIUM 135-236 FR CRC LAF
 STEARIC-ACID 12,200-66,000 SD HHB
 WOI
 STIGMAST-7-EN-3BETA-OL-BETA-D-
 GLUCOPYRANOSIDE PL JSG
 THIAMIN 4-9 FR CRC LAF
 L-(-)-THREONINE
 THREONINE 3,180 FR LAF
 THREONINE 15,300 SD LAF
 TRYPTOPHAN 825 FR LAF
 TYROSINE 1,413 FR LAF
 TYROSINE 10,200 SD LAF
 L-(-)-TYROSINE
 UREASE SD WOI
 VALINE 1,885 FR LAF
 VALINE 10,200 SD LAF
 (+)-VALINE
 WATER 915,100-957,000 FR CRC LAF
 WATER 71,000-81,000 SD CRC LAF
 ZINC 8 FR LAF

CITRUS AURANTIIFOLIA
 (CHRISTM.) SWINGLE

"LIME"

ASCORBIC-ACID 291-4,444 FR CRC USA
 ASH 2,000-3,800 FR CRC USA
 ALPHA-BERGAMOTENE 50-250 FR BML
 BERGAMOTTIN FR 411/
 BERGAPTEN FR 411/
 ALPHA-BISABOLENE 250-400 FR BML
 BETA-BISABOLENE 90 FR BML
 BORNEOL 60 FR BML
 CALCIUM 90-3,084 FR CRC USA
 CAMPHENE 50-80 FR BML
 CARBOHYDRATES 59,000-895,900 FR
 CRC USA
 BETA-CAROTENE 0-2 FR CRC USA
 CARYOPHYLLENE 30-250 FR BML
 1,4-CINEOLE 180 FR BML
 1,8-CINEOLE 70 FR BML
 CITRIC-ACID 800 FR HUL
 CITRONELLAL 140 FR HUL
 COPPER 1-6 FR USA
 P-CYMELE 50-1,160 FR BML
 DECANAL 9-10 FR BML
 DECANOL 6 FR BML
 DECYL-ACETATE 10 FR BML
 DIMETHOXYCOUMARIN FR 411/
 ALPHA-P-DIMETHYLSTYRENE 50 FR
 BML

2,2-DIMETHYL-5(-1)-METHYL-1-
 PROPENYL)TETRA-HYDROFURAN 30
 DODECANAL 1 FR BML
 EO 3,000-10,000
 FAT 2,000-26,700 FR CRC USA
 FENCHOL 120 FR BML
 FIBER 3,000-67,000 FR CRC USA
 FOLUENE 0
 FURFURAL 0-1 FR BML
 GERANIAL 10-680 FR BML
 GERANYL-ACETATE 30-310 FR BML
 IRON 0-67 FR CRC USA
 ISOIMPERATORIN FR 411/
 ISOPIMPINELLIN FR 411/
 LIMONENE 4,700-7,500 FR BML 411/
 LINALOOL 9-20 FR BML
 LINOLEIC-ACID 360-3,060 FR USA
 ALPHA-LINOLENIC-ACID 190-1,615 FR
 USA
 LYSINE 140-1,190 FR USA
 MALIC-ACID 2,000 FR HUL
 MALONIC-ACID FR HUL
 METHIONINE 20-170 FR USA
 5-METHOXY-PSORALEN FR 411/
 METHYLHEPTENONE 1 FR BML
 MYRCENE 70-1,030 FR BML
 MYRISTIC-ACID 10-85 FR USA
 NERAL 40-460 FR BML
 NERYL-ACETATE 1-310 FR BML
 NERYL-FORMATE 20 FR BML
 NIACIN 1-29 FR CRC USA
 NONANAL 20 FR BML
 NONANE 6 FR BML
 NONANOL 1-10 FR BML
 NOOTKATONE 1 FR BML
 OCTANOL 1 FR BML
 OCTANAL 30-80 FR BML
 OCTANOIC-ACID 2 FR BML
 OLEIC-ACID 160-1,360
 OXALIC-ACID FR HUL
 PALMITIC-ACID 10-85 FR USA
 PALMITOLEIC-ACID 30-255 FR USA
 PANTOTHENIC-ACID 2-18 FR USA
 ALPHA-PHELLANDRENE 20 FR BML
 BETA-PHELLANDRENE 90 FR BML
 PHLOBOTANNIN FR HUL
 PHOSPHORUS 110-2,000 FR CRC USA
 ALPHA-PINENE 80-240 FR BML
 BETA-PINENE 90-1,190 FR BML
 POLYHYDROXYPHLOBAN FR HUL
 POTASSIUM 820-9,533 FR CRC USA
 PROTEIN 4,000-65,000 FR CRC USA
 QUINIC-ACID FR HUL
 RIBOFLAVIN 0-2 FR CRC USA

SABINENE 160 FR BML
 GAMMA-SELINENE 20 FR BML
 SODIUM 10-222 FR CRC USA
 STEARIC-ACID 10-85 FR CRC USA
 SUCCINIC-ACID FR HUL
 SUGARS 0-17,400 FR HUL
 TERPINEN-1-OL 70 FR BML
 TERPINEN-4-OL 166 FR BML
 ALPHA-TERPINENE 80 FR BML
 GAMMA-TERPINENE 60-2,170 FR BML
 ALPHA-TERPINEOL 30-590 FR BML
 BETA-TERPINEOL 70 FR BML
 TERPINOLENE 60-120 FR BML
 THIAMIN 0-3 FR CRC USA
 ALPHA-THUJENE 40 FR BML
 THYMYL-METHYL-ETHER 2 FR BML
 TRIDECANE 2 FR BML
 ALPHA-ALPHA-P-TRIMETHYL-BENZYL-
 ALCOHOL 60 FR BML
 ALPHA-ALPHA-P-TRIMETHYL-BENZYL
 ALCOHOL ETHER 20 FR BML
 2,6,6-TRIMETHYL-2-VINYL-
 TETRAHYDROPYRAN 16 FR BML
 TRYPTOPHAN 30-255 FR USA
 UNDECANE 3 FR BML
 WATER 877,000-911,000 FR CRC USA
 XANTHOPHYLLS 11-19 FR HUL
 ZINC 1-9 FR USA

Hulme, A.C., ed. 1970. *The Biochemistry of Fruits and Their Products*. 2 vols.
 Academic Press, New York.

CITRUS AURANTIUM L.

"PETITGRAIN"

AURAPTEN PL JSG
 (+)-AURAPTENAL PL JSG
 CADINENE
 CAMPHENE
 D-CITRONELIC-ACID
 CITRONELLOL
 P-CYMENTHENE 100-270
 DECANAL 1
 DIPENTENE HHB
 FARNESOL
 FURFUROL
 GERANIAL 1
 GERANIOL 200-350
 GERANYL-ACETATE 261
 GERANYL-OXIDE
 CIS-3-HEXENOL 1
 ISOLIMONIC-ACID PL JSG
 LIMONENE 70-110

LINALOOL 1,990-2,795
 LINALYL-ACETATE 4,429-5,500
 MYRCENE 130-550
 NERAL 1
 NEROL 100-150
 D-NEROLIDOL
 NERYL-ACETATE 55-755
 BETA-OCIMENE HHB
 CIS-OCIMENE 1-110
 TRANS-OCIMENE 1-332
 ALPHA-PHELLANDRENE 1-20
 ALPHA-PINENE 1
 BETA-PINENE 70-170
 PYRROLE
 RHOIFOLIN PL JSG
 SABINENE 1-40
 ALPHA-TERPINENE 1
 GAMMA-TERPINENE 50-110
 TERPINEN-4-OL 50-80
 ALPHA-TERPINEOL 460-760
 TERPINOLENE 1-10
 ALPHA-TERPINYL-ACETATE 20-229
 THYMOL 1

Petitgrain is based on leaf or leaf and twig.
 Only leaf percentages have been converted here.

CITRUS AURANTIUM L.

"BITTER ORANGE"

ACETIC-ACID FL HHB
 ANTHRANILIC-ACID-METHYL-ETHER
 LF HHB
 ANTHRANILIC-ACID-METHYL-ETHER
 4-26 FL HHB
 ASCORBIC-ACID 3,000 LF WBB
 AURANETIN FR WBB
 AURANTIAMARIN FR WBB
 AURAPTEN PL JSG
 (+)-AURAPTENAL PL JSG
 BERGAPTEN FR 411/
 CADINENE LF CCO
 CALCIUM 3,710-4,230 FR SMO
 CAMPHENE LF HHB
 CINNAMIC-ACID FH HU HHB
 CITRANTIN FR D&A
 CITRIC-ACID FR WBB
 CITRONELIC-ACID LF HHB
 COPPER 4-10 FR SMO
 COUMARIN FR 411/
 DECYLALDEHYDE FL HHB
 6,7-DIMETHOXYCOUMARIN FR 411/
 DUODECYLALDEHYDE FR HU HHB

DIPENTENE LF HHB
 EO 1,000-2,000 FL HHB
 EO 7,000-25,000 FR HHB
 EO 3,000 LF HHB
 FARNESOL LF HHB
 FAT 448,600 SD WBB
 FORMIC-ACID FR HU HHB
 GERANIC-ACID LF HHB
 GERANIOL LF HHB
 GERANYLOXIDE LF HHB
 FURFUROL LF HHB
 HESPERIDIN 700-2,500 FR HHB
 INDOL FL HHB
 IRON 60-260 FR SMO
 ISOHESPERIDIN FR WBB
 ISOLIMONIC-ACID PL JSG
 JASMONE FL HHB
 LIMONENE LF HHB
 DELTA-LIMONENE FR WBB
 D-LINALOOL LF HHB
 DL-LINALOOL LF HHB
 LINALYL-ACETATE 80-520 FL HHB
 L-LINALYLACETATE LF HHB
 MAGNESIUM 800-1,730 FR SMO
 MANGANESE 8 FR SMO
 MYRCENE FL HHB
 NARINGIN FR 411/
 NEOHESPERIDIN FR HHB
 NEROL LF HHB
 D-NEROLIDOL LF HHB
 NERYL-ACETATE LF HHB
 NOBILETIN FR 411/
 NONANOL FR HU HHB
 NONYLALDEHYDE FR HU HHB
 BETA-OCIMENE LF HHB
 OCTALDEHYDE FR HU HHB
 OCTANOL FR HU HHB
 PELARGONALDEHYDE FR HU HHB
 PELARGONIC-ACID FR HU HHB
 PENTANOL FR HU HHB
 PHELLANDRENE FR HU HHB
 PHENYLACETIC-ACID FL HHB
 PHENYLETHYLALCOHOL FL HHB
 BETA-PINENE LF HHB
 POTASSIUM 7,020-13,800 FR SMO
 PYRROL LF HHB
 RHOIFOLIN PL JSG
 SABINENE FR HU HHB
 SINENSETIN FR HU HHB
 SODIUM 54-116 FR SMO
 STACHYDRINE 1,000 LF HHB
 L-STACHYDRINE LF WBB
 TANGERETIN FR HU HHB
 TANNIN FR HHB

TERPENYLACETATE FR HU HHB
 GAMMA-TERPINENE FR HU HHB
 4-TERPINENOL FR HU HHB
 DL-TERPINEOL LF HHB
 TERPINOLENE FR HU HHB
 TETRA-OMETHYL-SCUTELLAREIN
 UMBELLIFERONE PL DAA
 VIOLAXANTHIN FR HU HHB
 ZINC 16 FR SMO

CITRUS AURANTIUM L.

“BITTER ORANGE; NEROLI”

ACETALDEHYDE
 ACETIC-ACID
 ASCORBIC-ACID 420-3,947 FR CRC
 ASH 5,000-64,000 FR CRC
 AURANTIAMENE
 AURANETIN FR CCO
 AUROPTENOL EO CCO
 BENZOIC-ACID
 BUTANOL
 DELTA-CADINENE
 CALCIUM 18-3,360 FR CRC
 L-CAMPHENE FL
 CAPRINALDEHYDE
 CARBOHYDRATES 97,000-909,000 FR
 CRC
 DELTA-3-CARENE
 BETA-CAROTENE 1-27 FR CRC
 CARVONE
 CARYOPHYLLENE
 CINNAMIC-ACID
 CITRAL
 CITRIC-ACID
 CITRONELLAL
 CITRONELLOL
 BETA-COPAENE
 CRYPTOXANTHIN
 P-CYMENE
 P-CYMOL
 DECYLALDEHYDE
 DECYLPELARGONATE
 DIPENTENE
 DODECANAL
 DODECEN-2-AL-(1)
 DUODECLYALDEHYDE
 BETA-ELEMENE
 GAMMA-ELEMENE
 EO 3,000 LF HHB
 EO 1,000-2,000 FL HHB
 EO 7,000-25,000 FR HHB
 ETHANOL
 FAT 0-8,000 FR CRC

FARNESOL
 FIBER 3,000-160,000
 FORMALDEHYDE
 FORMIC-ACID
 GERANIAL
 GERANIOL
 GERANYL-ACETATE FR CCO
 GUM
 HESPERIDIN LF FL FR
 HEXANOL
 TRANS-HEXEN-2-AL-1
 ALPHA-HUMULENE
 5-HYDROXYAURANETIN
 INDOLE
 ALPHA-IONONE
 IRON 3-42 FR CRC
 ISOSCUTELLAREIN
 ISOSINENSETIN
 ISOTETRAMETHYLETHER
 LAURIC-ALDEHYDE
 D-LIMONENE
 LIMONENE 1,000-8,000 PPM
 LIMONIN ANTIPLASMODIAL
 L-LINALOOL
 L-LINALYL-ACETATE FR CCO
 MALIC-ACID
 MANNOSE
 METHANOL
 MYRCENE
 NARINGENIN
 NEOHESPERIDIN FR CCO
 NERAL
 NEROL
 NEROLIDOL
 NERYL-ACETATE FR CCO
 NIACIN 3-24 FR CRC
 NOBILETIN
 NOMILIN
 NONANOL
 NONYLALDEHYDE
 NOOTKATONE
 BETA-OCIMENE FL
 OCTANOL
 OCTYL-ACETATE
 PALMITIC-ACID
 PECTIN
 PELARGONIC-ACID
 PENTANOL
 PHELLANDRENE
 PHENOL
 PHENYLACETIC-ACID
 PHENYLETHANOL FL
 PHOSPHORUS 120-1,600 FR CRC
 ALPHA-PINENE

BETA-PINENE
 POTASSIUM 1,020 FR CRC
 PROTEIN 6,000-56,000 FR CRC
 RHOIFOLIN
 RIBOFLAVIN 1-3 FR CRC
 SABINENE
 SINENSETIN
 STACHYDRINE 1,000 LF HHB
 TANGERETIN
 TANNIC-ACID
 GAMMA-TERPINENE
 TERPENYL-ACETATE
 ALPHA-TERPINEOL
 4-TERPINEOL
 TERPINOLENE
 TETRA-O-METHYL-SCUTELLAREIN
 THIAMIN 1-6 FR CRC
 UNDECANAL
 VALENCENE
 VIOLAXANTHIN
 WATER 857,000-892,000 FR CRC
 ALPHA-YLANGENE

Much citrus essential oil data are suspect; I
 record here what I found here exclusive of
 that called petitgrain, filed separately under
 that common name. Main sources=BML,
 GEO, HHB

CITRUS LIMON (L.) BURMAN F.
 "LEMON"

ACETIC-ACID EO BML
 ADENOSINE PE NAP
 ALPHA-AMINOBTYRIC-ACID
 APIGENIN-C-GLYCOSIDE
 ASCORBIC-ACID 5,208-5,566 FR CRC
 PED
 ASH 28,000 FR PED
 AUREUSIDIN
 AUREUSIDIN-6-GLUCOSIDE
 AUREUSIDIN-6-RHAMNOGLUCOSIDE
 ALPHA-BERGAMOTENE 250 EO BML
 BERGAMOTENE 16-40 EO BML
 BERGAMOTTIN 649 EO NAP
 BERGAPTEN 10 EO NAP
 BETA-BISABOLENE 23-400 EO BML
 BRAYLIN RT NAP
 BYAKANGELICIN 29 EO BML NAP
 BYAKANGELICOL TR EO BML NAP
 CADINENE EO BML
 CAFFEIC-ACID 21-35 FR CRC(FSN)
 CAFFEINE 50 FL NAP
 CALCIUM 700-3,227 FR CRC

CAMPHENE 2-50 EO BML
 CARBOHYDRATES 111,000-863,000 FR
 CRC
 DELTA-CARENE EO BML
 BETA-CAROTENE 0-2 FR JAD PED
 CARVEOL EO NAP
 CARVONE EO NAP
 CARYOPHYLLENE 11-28 EO BML
 BETA-CARYOPHYLLENE 100 EO (LF)
 NAP
 CARYOPHYLLENE-OXIDE 0.8 EO (LF)
 CHLOROPHYLL-A LF NAP
 CHLOROPHYLL-B LF NAP
 1,8-CINEOLE 11,000-70,000 EO (LF) NAP
 CITRAL 250-300 EO BML
 CITRIC-ACID 59,500 FR WOI
 CITRONELLAL 25,000-89,000 EO (LF)
 NAP
 CITRONELLOL 20 EO (LF) NAP
 CITRONELLYL-ACETATE 4-20 BML
 CITRONETIN PL JSG
 CITRONIN BML
 CITROPTEN FR NAP
 CITRUSIN-A PE NAP
 CITRUSIN-B PE NAP
 CITRUSIN-C PE NAP
 CONIFERIN PE NAP
 ALPHA-COPAENE EO BML
 P-COUMARIC-ACID 6-102 FR CRC(FSN)
 ALPHA-CUBEBENE EO BML
 P-CYMELE 12-31 EO BML
 P-CYMOL EO
 DEACETYL-NOMILIN SD NAP
 DEACETYL-NOMILIN-17-O-BETA-D-
 GLUCOPYRANOSIDE SD NAP
 DECANAL 6-20 EO BML
 DECANAL-AL PE NAP
 DECANOIC-ACID EO BML
 DECANOL EO BML
 DECYL-ACETATE 5 BML
 DECYLALDEHYDE LF
 DICONIFERYL-ALCOHOL-4-BETA-D-
 GLUCOSIDE PE NAP
 4',7-DIHYDROXY-3'-METHOXY-
 FLAVONONE-8-O-BETA-D-GLUCOSYL-
 RHAMNOSIDE PE NAP
 6-8-DI-C-GLUCOSYL-DIOSMETIN PE
 NAP
 5,7-DIMETHOXYCOUMARIN EO BML
 6,7-DIMETHOXYCOUMARIN 162 BK
 NAP BML
 P-ALPHA-DIMETHYLSTYRENE
 DIOSMETIN
 DIOSMIN 5 FR NAP
 DODECANAL 10 EO BML
 DODECANOIC-ACID EO BML
 BETA-ELEMENE EO BML
 EPIJASMONIC-ACID-METHYL-ESTER
 PE NAP
 ERIOCITRIN 1 FR NAP
 ERIODICTYOSIDE FR 411/
 FARNESENE EO BML
 FAT 28,000 FR PED
 FAT 300,000-400,000 SD
 FERULIC-ACID 14-40 FR CRC(FSN)
 FIBER 17,000-47,000 FR FNF PED
 D-GALACTURONIC-ACID FR HHB
 GERANIAL 42-236 EO BML
 GERANIAL 3,000-270,000 EO (LF) NAP
 GERANIOL EO BML
 GERANIOL-ACETATE 3,000 EO (LF)
 NAP
 5-GERANOXY-7-METHOXYCOUMARIN
 630 EO BML NAP
 5-GERANOXY-7-METHOXYPSORALEN
 EO BML
 8-GERAN-OXYPsorALEN PE BML
 GERANYL-ACETATE 12-310 EO BML
 GERANYL-BUTYRATE EO BML
 GERANYL-FORMATE EO BML
 5-GERANYL-OXYPsorALEN PE BML
 GERANYL-OXY-PYRANOCOUMARIN
 RT NAP
 7-GLUCOSYL-APIGENIN FL NAP
 6-C-GLUCOSYL-DIOSMETIN PE NAP
 8-C-GLUCOSYL-DIOSMETIN PE NAP
 GLUTAMIC-ACID
 HEPTADECANAL EO BML
 HEPTANAL 4 EO BML
 HESPERIDIN 44 FR NAP
 HESPERIDIN 68,800 PE NAP
 HESPERIDOSIDE FR 411/
 HEXADECANAL EO BML
 HEXANAL EO BML
 HEXANOL EO BML
 3-HEXEN-1-OL EO BML
 ALPHA-HUMULENE 10 EO BML
 BETA-HUMULENE 10 EO BML
 3-(4-HYDROXY-3-METHOXY-PHENYL)-
 1-GLUCOSYL-PROP-2-ENE PE NAP
 IMPERATORIN FR 411/
 IRON 23-72 FR CRC WOI
 ISOIMPERATORIN TR EO BML NAP
 ISOLIMOCITROL PE NAP
 ISOLIMOCITROL-3-BETA-D-GLUCOSIDE
 PL JSG
 ISOLIMOCITROL-3,7,4'-TRIMETHYL-
 ETHER PL JSG

- 5-ISOPENTENOXY-7-METHOXYCOUMARIN EO BML
 ISOPIMPINELLIN
 ISOPULEGOL 40,000 EO (LF) NAP
 ISOPULEGOLE 18,000-114,000 EO (LF) NAP
 ISORHAMNETIN FL NAP
 ISORHAMNETIN-3-ARABINOGLUCOSIDE
 ISORHOIFOLIN LF NAP
 ISOVITEXIN PE NAP
 JASMONIC-ACID-METHYL-ESTER PE NAP
 KILOCALORIES 2,640 FR PED
 LAURALDEHYDE FR HHB
 LIMETTIN 295 EO BML NAP
 LIMOCITRIN PE NAP
 LIMOCITRIN-3-(6-O-ALPHA-L-RHAMNOSYL-BETA-D-GLUCOSIDE) PE NAP
 LIMOCITRIN-3-O-(3 HYDROXY-3-METHYL-GLUTARATE(1,2)-BETA-D-GLUCOSIDE) PE NAP
 LIMOCITRIN-3-O-(5-ALPHA-GLUCOSYL-3 HYDROXY-3-METHYL-GLUTARATE(1,2)-BETA-GLUCOSIDE) PE NAP
 LIMOCITROL-3-O-(5-ALPHA-GLUCOSYL-3 HYDROXY-3-METHYL-GLUTARATE(1,2)-BETA-GLUCOSIDE) PE NAP
 LIMOCITROL PE NAP
 LIMONENE 2,796-8,000 EO BML
 LIMONENE 284,000-754,000 EO (LF) NAP
 LIMONENE 512,000-774,000 EO (PE) NAP
 CIS-LIMONENE-1,2-OXIDE EO NAP
 TRANS-LIMONENE-1,2-OXIDE EO NAP
 LIMONIN SD NAP
 LIMONIN-17-O-BETA-D-GLUCOPYRANOSIDE SD NAP
 LIMONOATE-A-RING-LACTONE FR NAP
 LINALOOL 8-30 EO BML
 LINALOOL 7,000-110,000 EO (PE) NAP
 LINALOOL 17,000-81,000 EO (LF) NAP
 LINALYL-ACETATE EO
 LUTEIN 0.12-1.2 FR JAF37:657
 LUTEOLIN FL NAP
 LUTEOLIN-7-O-BETA-RUTINOSIDE LF NAP
 MENTH-1-EN-9-OL EO BML
 P-MENTHA-2,8-DIEN-1-OL EO BML
 P-MENTHA-1,8-DIEN-9-YL-ACETATE EO BML
 4-(3-METHYL-2-BUTENOXY)-ACETOPHENONE
 PE NAP
 METHYL-HEPTANONE EO NAP
 METHYL-HEPTENONE 6,000 EO (LF) NAP
 N-METHYL-TYRAMINE LF HHB
 MUCILAGE FR 411/
 MYRCENE 65-1,270 EO BML
 MYRCENE 13,000 EO (LF) NAP
 NARINGIN PE NAP
 NARINGOSIDE FR 411/
 NARIRUTIN PE NAP
 NEOHESPERIDIN PE NAP
 NEOXANTHIN LF NAP
 NERAL 27-130 EO BML
 NERAL 4,000-270,000 EO (LF) NAP
 NEROL 18,000-76,000 EO (LF) NAP
 NEROL-ACETATE 16-310 EO BML
 NEROL-ACETATE 40 EO (LF) NAP
 NERYL-FORMATE 20 EO BML
 NIACIN 10-19 FR CRC PED
 NOMILIN SD NAP
 NOMILIN-17-O-BETA-D-GLUCOPYRANOSIDE SD NAP
 NONANAL 9-30 EO BML
 NONAN-1-AL 3-7 EO BML
 NONYL-ACETATE
 NONYL-ALDEHYDE EO
 NOOTKATONE 1EO BML
 OBACUNONE SD NAP
 OBACUNONE-17-O-BETA-D-GLUCOPYRANOSIDE SD NAP
 OCIMENE 10,000 EO (LF) NAP
 OCTANOIC-ACID EO BML
 OCTAN-1-AL PE NAP
 OCTANOL 10-15 EO BML
 OCTOPAMINE LF HHB
 OCTYL-ACETATE EO BML
 OCTYLALDEHYDE EO
 OTHOL RT NAP
 OXYPEUCEDANIN 207 EO BML NAP
 OXYPEUCEDANIN-HYDRATE 64 EO BML NAP
 PECTIN PE NAP
 PENTADECANAL EO BML
 PENTADECANE
 7-PENTAHYDROXY-2',3',5,5'-PENTAHYDROXY-FLAVANONE-7-(6-O-ALPHA-L-RHAMNOSYL-BETA-D-GLUCOSIDE) PE NAP

ALPHA-PHELLANDRENE 20 EO BML
 BETA-PHELLANDRENE 80 EO BML
 PHELLOPTERIN EO BML
 O-PHENYLPHENOL EO BML
 PHOSPHORUS 100-1,979 FR CRC
 ALPHA-PINENE 40-500 EO BML
 ALPHA-PINENE 500-2,000 EO (LF) NAP
 ALPHA-PINENE 5,000-14,000 EO (PE)
 NAP
 BETA-PINENE 40-1,270 EO BML
 PONCIRIN
 POTASSIUM 14,700 FR PED
 PROTEIN 10,000-111,000 FR CRC
 QUERCETIN FL NAP
 QUERCETIN-3,5-DIGLUCOSIDE
 7-RHAMNO-GLUCOSYL-DIOSMETIN FL
 NAP
 7-RHAMNO-GLUCOSYL-LUTEOLIN FL
 NAP
 RIBOFLAVIN 2-3 FR CRC PED
 RUTIN 1-2 FR NAP
 RUTIN LF NAP
 SABINENE 50-175 EO BML
 SABINENE 2,700 EO (LF) NAP
 SCOPOLETIN SH NAP
 SELINENE EO BML
 SESELIN RT NAP
 SINAPIC-ACID 14-18 FR CRC(FSN)
 BETA-SITOSTEROL
 GAMMA-SITOSTEROL
 SODIUM 470 FR PED
 STACHYDRINE
 SUBEROSIN RT NAP
 SYNEPHRINE LF HHB
 SYRINGIN PE NAP
 ALPHA-TERPINENE 70 EO BML
 GAMMA-TERPINENE 290-1,400 EO BML
 TERPINEN-4-OL 1-40 EO BML
 TERPINEN-4-OL 1,000-11,000 EO (PE)
 NAP
 TERPINEN-4-OL 10,000 EO (LF) NAP
 ALPHA-TERPINENE PE NAP
 GAMMA-TERPINENE 12,000-58,000 EO
 (PE) NAP
 GAMMA-TERPINENE 3,000-44,000 EO
 (LF) NAP
 ALPHA-TERPINEOL 6-50 EO BML
 ALPHA-TERPINEOL 4,000-73,000 EO
 (PE) NAP
 ALPHA-TERPINEOL 11,000-125,000 EO
 (LF) NAP
 TERPINOLENE 14-120 EO BML
 ALPHA-TERPINYL-PROPIONATE EO
 BML

TETRADECANAL EO BML
 TETRADECANE EO BML
 TETRAHYDROGERANIOL 10 EO BML
 THIAMIN 4-6 FR CRC
 ALPHA-THUJENE 16-40 EO BML
 THYMOL 53,000-111,000 EO (PE) NAP
 THYMOL 400 EO (LF) NAP
 TRIDECANAL EO BML
 4',5,7-TRIHYDROXY-3',8-DIMETHOXY-
 FLAVONE-3-O-BETA-D-GLUCOSIDE
 PE NAP
 4',5,7-TRIHYDROXY-3',8-DIMETHOXY-
 FLAVONE-3-O-BETA-D-GLUCOSYL-
 RHAMNOSIDE PE NAP
 3',4',5-TRIHYDROXY-FLAVONONE-7-O-
 BETA-D-RHAMNOSYL GLUCOSIDE
 PE NAP
 4',5,7-TRIHYDROXY-FLAVONE-6,8-DI-C-
 GLUCOSIDE PE NAP
 3',4',5-TRIHYDROXY-FLAVONE-7-O-
 BETA-D-RHAMNOSYL GLUCOSIDE
 PE NAP
 4',5,7-TRIHYDROXY-FLAVONE-6-O-
 BETA-D-RHAMNOSYL GLUCOSIDE
 PE NAP
 4',5,7-TRIHYDROXY-FLAVONE-8-O-
 BETA-D-RHAMNOSYL GLUCOSIDE
 PE NAP
 4',5,7-TRIHYDROXY-3',6,8-
 TRIMETHOXY-FLAVONE-3-O-BETA-D-
 GLUCOSIDE PE NAP
 2',4',5-TRIHYDROXY-FLAVONONE-7-O-
 BETA-D-GLUCOSYL-RHAMNOSIDE
 PE NAP
 ALPHA,ALPHA-P-TRIMETHYLBENZYL-
 ALCOHOL EO? BML
 TYRAMINE LF
 UMBELLIFERONE SH NAP
 UMBELLIPRENIN SH NAP
 UNDECANAL EO BML
 VICENIN-2 PE NAP
 VIOLAXANTHIN LF NAP
 WATER 850,000-894,000 FR FNF PED
 XANTHOXYLETIN RT NAP
 XANTHYLETIN RT NAP
 XYLOSYL-VITEXIN FL NAP
 2"-O-XYLOSYL-VITEXIN FL NAP
 ZEAXANTHIN LF NAP

CITRUS MEDICA L.

"CITRON"

ARSENIC 1.64 FR CAL
 CALCIUM 6,840 FR CAL

CITRAL FR HU CCO
 COPPER 9 FR CAL
 DIPENTENE FR HU HHB
 GERANYL-ACETATE FR HU CCO
 HESPERIDIN FR HU CCO
 IRON 60 FR CAL
 D-LIMONENE FR HU CCO
 LINALYL-ACETATE FR HU CCO
 MAGNESIUM 950 FR CAL
 MANGANESE 9 FR CAL
 NORDENTATIN RT CCO
 PHELLANDRENE FR HU CCO
 POTASSIUM 15,500 FR CAL
 SODIUM 113 FR CAL
 3,5,6-TRIHYDROXY-7,4'-DIMETHOXY-
 FLAVONE PL JSG
 3,5,6-TRIHYDROXY-7,3',4'-
 TRIMETHOXY-FLAVONE PL JSG
 XANTHYLETIN RT CCO
 ZINC 14 FR CAL

CITRUS RETICULATA BLANCO

"TANGERINE; MANDARIN"

ACETALDEHYDE 0-2 FR BML
 ALANINE 70-2,740 FR USA HUL
 ALUMINUM 1-15 FR AAS
 GAMMA-AMINOBUTYRIC-ACID 180 FR
 HUL
 BETA-APOCAROTENOL FR HUL
 ARGININE 440-3,546 FR USA
 ARSENIC 0.04-0.3 FR AAS
 ASCORBIC-ACID 280-3,684 FR USA
 ASH 3,900-31,525 FR AAS
 ASPARAGINE 180-850 FR HUL
 ASPARTIC-ACID 240-6,206 FR USA HUL
 BENZYL-ALCOHOL 1-2 FR BML
 BORON 1-14 FR AAS BOB
 BROMINE >1 FR AAS
 GAMMA-CADANINE 2 FR BML
 DELTA-CADINENE 20 FR BML
 CADMIUM <002 FR AAS
 CALAMIN PL JSG
 CALCIUM 140-3,077 FR CRC USA
 CAMPHENE 1-40 FR BML
 CARBOHYDRATES 102,000-901,914 FR
 CRC USA
 DELTA-3-CARENE 1-6 FR BML
 ALPHA-CAROTENE 0.2-2 FR JAF37:657
 BETA-CAROTENE 1-44 FR CRC USA
 CIS-CARVEOL 1-4 FR BML
 TRANS-CARVEOL 0-4 FR BML
 CARVONE 0-3 FR BML
 CARYOPHYLLENE 2-9 FR BML

CHLORINE 24 FR
 CHROMIUM 0.01-0.08 FR AAS
 1,8-CINEOLE 0-76 FR BML
 BETA-CITRAURIN FR HUL
 CITRIC-ACID 8,600-12,200 FR HUL
 CITRONELIC-ACID FR BML
 CITRONELLAL 1-20 FR BML
 CITRONELLOL 1-50 FR BML
 CITRONELLYL-ACETATE 4-10 FR BML
 COBALT <0.005 FR AAS
 ALPHA-COPAENE 1-2 FR BML
 COPPER 0-4.8 FR AAS USA
 CYCLOCALAMIN PL JSG
 P-CYME NE 14-820 FR BML
 CYSTINE 70-564 FR USA
 DECANAL 3-90 FR BML
 DECANOIC-ACID 3 FR BML
 DECANOL 4 FR BML
 DECYL-ACETATE 1-5 FR BML
 DIMETHYL-ANTHRALINATE 90 FR
 BML
 DODECANAL 1-15 FR BML
 DODECANOIC-ACID 1 FR
 DODECANOL 1 FR BML
 BETA-ELEMENE 1-80 FR BML
 GAMMA-ELEMENE 15-20 FR BML
 DELTA-ELEMENE 6-10 FR BML
 EO 10,000 FR GEO
 ETHANOL 0-183 FR BML
 FAT 1,900-22,000 FR CRC USA
 FERULOYL-PUTRESCINE 0 FR HUL
 FIBER 1,890-43,000 FR CRC USA
 FLUORINE 0.1-0.76 FR AAS
 FOLACIN 0-2 FR USA
 GERANIAL 6-30 FR BML
 GERANIOL 1-4 FR BML
 GERANYL-ACETATE 1-18 FR BML
 GLUTAMIC-ACID 160-5,158 FR BML
 GLYCINE 20-5,158 FR HUL
 HEPTANOIC-ACID 1 FR BML
 HEPTANOL 1-2 FR BML
 HESPERIDIN
 CIS-3-HEXENOL 1 FR BML
 HISTIDINE 440-3,546 FR USA
 HUMULENE 5 FR BML
 IRON 1-79 FR CRC USA
 ISOLEUCINE 170-1,370 FR USA
 ISOPULEGOL 1-5 FR BML
 LEUCINE 50-1,290 FR USA HUL
 LIMONENE 6,500-9,400 FR BML
 LINALOOL 3-610 FR BML
 LINOLEIC-ACID 270-2,176 FR USA
 ALPHA-LINOLENIC-ACID 100-806 FR
 USA

LONGIFOLENE 1 FR BML
 LUTEIN 0.2-2 FR JAF37:657
 LYSINE 40-2,579 FR USA HUL
 MAGNESIUM 111-1,416 FR USA
 MALIC-ACID 1,800-2,100 FR HUL
 MALONIC-ACID FR HUL
 MANGANESE 0-4.6 FR AAS USA
 P-MENTHA-1-EN-9-YL-ACETATE 0 FR
 BML
 MERCURY <0.001 FR AAS
 METHIONINE 130-1,048 FR USA
 METHYL-HEPTENONE 1 FR BML
 METHYL-N-METHYLANTHRALINATE
 1-33 FR BML
 METHYL-THYMOL 10 FR BML
 N-METHYL-TYRAMINE 0-58 FR BML
 MOLYBDENUM <0.1 FR AAS
 MYRCENE 46-760 FR BML
 MYRISTIC-ACID 10-80 FR USA
 NERAL 2-6 FR BML
 NEROL 1-5 FR BML
 NERYL-ACETATE 1-10 FR BML
 NIACIN 1-35 FR BML
 NICKEL 0.01-0.3 FR AAS
 NITROGEN 1,600-13,075 FR AAS
 NONANAL 1-8 FR BML
 NOBELITIN FR HUL
 NONANOIC-ACID 1 FR BML
 NONANOL 2-10 FR BML
 NOOTKATONE 1 FR BML
 OCIMENE 8 FR BML
 OCTANAL 4-30 FR BML
 OCTANOIC-ACID 4 FR BML
 OCTANOL 9 FR BML
 OCTYL-ACETATE 2-4 FR BML
 OCTOPAMINE 1-2 FR HUL
 OLEIC-ACID 300-2,418 FR USA
 OXALIC-ACID FR HUL
 PALMITIC-ACID 200-1,612 FR USA
 PALMITOLEIC-ACID 40-320 FR USA
 PANTOTHENIC-ACID 2-16 FR USA
 PERILLALDEHYDE 0-10 FR BML
 PERILLYL-ACETATE 1-10 FR BML
 ALPHA-PHELLANDRENE 3-32 FR
 BML
 PHENYLALANINE 50-1,693 FR USA
 HUL
 PHOSPHORUS 90-1,385 FR CRC USA
 ALPHA-PINENE 30-393 FR BML
 BETA-PINENE 90-210 FR BML
 POTASSIUM 1,200-13,127 FR AAS CRC
 USA
 PROLINE 310-2,499 FR USA
 PROTEIN 6,130-80,228 FR CRC USA

QUINIC-ACID FR HUL
 RETICULAXANTHIN FR HUL
 RETROCALAMIN PL JSG
 RIBOFLAVIN 0-4 FR CRC USA
 RUBIDIUM 0.25-2.4 FR AAS
 SABINENE 40-210 FR BML
 SABINENE-HYDRATE 1-20 FR BML
 SELENIUM <0.0002 FR AAS
 ALPHA-SELINENE 2 FR BML
 GAMMA-SELINENE 1 FR BML
 SERINE 120-1,773 FR USA HUL
 BETA-SESQUIPHELLANDRENE 20 FR
 BML
 SILICON 3-23 FR AAS
 ALPHA-SINESAL 1-32 FR BML
 SODIUM 8-154 FR CRC USA
 STEARIC-ACID 10-80 FR USA
 SUGARS 69,400-113,600 FR USA
 SULFUR 130-1,000 FR AAS
 SYNEPHERINE 50-280 FR HUL
 TANGERAXANTHIN FR HUL
 TANGERITIN FR HUL
 TERPINEN-4-OL 2-110 FR BML
 ALPHA-TERPINENE 4-42 FR BML
 GAMMA-TERPINENE 210-2,014 FR
 BML
 ALPHA-TERPINEOL 2-110 FR BML
 BETA-TERPINEOL 40 FR BML
 TERPINEOLENE 4-110 FR BML
 ALPHA-TERPINYL-ACETATE 1-5 FR
 BML
 TETRADECANAL 5 FR BML
 THIAMIN 1-8 FR CRC USA
 THREONINE 100-806 FR USA
 ALPHA-THUJENE 46-58 FR BML
 THYMOL 1-20 FR BML
 THYMYL-METHYL-ETHER 10 FR
 BML
 ALPHA-TOCOPHEROL 3-31 FR TOT
 3,5,5-TRIMETHYLBENZYL-ALCOHOL
 3 FR BML
 TRYPTOPHAN 60-484 FR BML
 TYRAMINE 1 FR HUL
 TYROSINE 110-887 FR USA
 UNDECANOIC-ACID 1 FR BML
 UNDECANOL 1 FR BML
 VALINE 20-2,176 FR USA HUL
 VIT-B6 1-5 FR USA
 WATER 879,720-886,000 FR CRC USA
 ALPHA-YLANGENE 1 FR BML
 ZINC 0.8-8 FR AAS

AAS=ACTA AGRIC SCAND SUPPL
 22:1980 H20=87%; ZMB=7.7 X APB

CITRUS SINENSIS (L.) OSBECK**"ORANGE"**

ACETALDEHYDE 3-15 FR JU JAF38:1050

ACETIC-ACID

ALANINE 30-3,775 FR USA HUL

ALUMINUM 1-165 FR USG

GAMMA-AMINOBUTYRIC-ACID 40-730
FR HUL

ANTHERAXANTHIN FR HUL

APIGENIN-7-O-ALPHA-L-RHAMNO-
GLUCOSIDE LF NAP

BETA-APO-CAROTEN-8-AL PE NAP

BETA-APO-8'-CAROTINAL PE NAP

APOVIOLAXANTH-10'-AL PE NAP

ARABAN FR HUL

ARGININE 230-4,908 FR USA HUL

ARSENIC 0.00135-0.1538 FR AAS USG

ASCORBIC-ACID 500-4,071 FR USA HUL

ASH 4,100-36,920 (-55,000) FR AAS CRC
USA USG

ASPARAGINE 200-1,800 FR HUL

ASPARTIC-ACID 70-8,607 FR USA HUL

AURAPTENE FR HUL

AURAXANTHIN 0-4 FR HUL

BARIUM 0.54-16.5 FR USA

ALPHA-BERGAMOTENE 6 FR BML

BERGAPTOL FR HUL

BETAINE 390-630 FR HUL

BORON 1.89-27.5 FR AAS USG 1/

BRAYLIN RT NAP

BROMINE <1 FR AAS

BUTYRIC-ACID FR HUL

DELTA-CADINENE PE NAP

CADMIUM 0.0005-0.1375 FR USG

CAFFEIC-ACID 36-50 FR CRC(FSN)

CAFFEINE 0.3 BD FL NAP

CAFFEINE 62 FL NAP

CAFFEINE 6 LF NAP

CALCIUM 210-5,615 (-7,150) FR AAS
CRC USA 1/

CAMPESTEROL FR NAP

CAPRIC-ACID FR HUL

CAPROIC-ACID FR HUL

CAPRYLIC-ACID FR HUL

CARBOHYDRATES 99,000-887,125 FR
CRC USAALPHA-CAROTENE 0.19-1.9 FR
JAF37:657

BETA-CAROTENE 1-28 FR CRC USA

ETA-CAROTENE PE NAP

TAU-CAROTENE PE NAP

ZETA-CAROTENE 0-2 FR HUL

CAROTENOIDS 12-35 FR (PEEL) HUL

CARVONE 2-10 FR BML

CARYOPHYLLENE PE NAP

CHLORINE 12-32 FR

CHOLESTEROL FR NAP

CHOLINE 70-160 FR

CHROMIUM 0.005-0.385 FR AAS USG 1/

CITFLAVANONE BK (RT) NAP

CITRABASINE 14 BK (RT) NAP

CITRACRIDONE-I 400 BK (RT) NAP

BETA-CITRAURIN PE NAP

CITRIC-ACID 5,600-9,800 FR HUL

CITRONELLAL 0-55 FR BML HUL

CITRUNOBIN BK (RT) NAP

CITRUSINS PL JSG

CITRUSININE-I 80 BK (RT) NAP

CITRUSININE-II 40 BK (RT) NAP

COBALT 0.001-0.055 FR AAS USG

CONIFERIN PE NAP

ALPHA-COPAENE PE NAP

COPPER 0.44-5.5 FR AAS USA USG

P-COUMARIC-ACID 5-17 FR CRC(FSN)

2'-TRANS-O-P-COUMAROYL-

GALACTARIC-ACID PE NAP

2'-TRANS-O-P-COUMAROYL-

GLUCARIC-ACID PE NAP

CRENULATIN 60 BK (RT) NAP

CRYPTOFLAVIN PE NAP

CRYPTOXANTHIN FR HUL

CRYPTOXANTHIN-5,5',6,6'-DIEPOXIDE
PE NAPCRYPTOXANTHIN-5,5',6,6'-DIEPOXIDE
PE NAP

CYANIDIN-3-GLUCOSIDE FR HUL

BETA-CUBEENE 10 FR BML

P-CYMENE 20 FR BML

CYSTINE 100-755 FR USA

DEACETYL-NOMILIN SD NAP

DECANAL 0-0.15 FR JU JAF38:1050

DECANAL 10-60 FR BML

DELPHINIDIN-3-GLUCOSIDE FR HUL

2,4-TRANS,TRANS-O-FERULOYL-

GLUCARIC-ACID PE NAP

5,6-DIHYDRO-BETA-BETA-CAROTEN-

3,3',5,6-TETROL FR JU NAP

DIHYDROKAEMPFEROL-4'-METHYL-

ETHER-7-O-RHAMNOSIDE FR NAP

6,7-DIMETHOXYCOUMARIN 162 BK
NAPDIOSMETIN-7-O-ALPHA-L-RHAMNO-
GLUCOSIDE LF NAP

DIOSMIN PE NAP

DODECANAL 5-20 FR BML

BETA-ELEMENE 5 FR BML

ELEMOL 28,200 BK (RT) NAP
 EO 10,000 FR GEO
 5,8-EPOXY-5,8-DIHYDRO-8'-APO-BETA-CAROTEN-3,10-DIOL FR JU NAP
 EPOXY-NOOKATONE PE NAP
 5,8-EPOXY-5,5',8-TETRAHYDRO-BETA,BETA-CAROTEN-3,3',5',6'-TETROL FR JU NAP
 EPOXY-VALENCENE FR NAP
 ETHANOL 64-900 FR JU JAF38:1050
 ETHYL-ACETATE 0.01-0.58 FR JU JAF38:1050
 ETHYL-BUTYRATE 0.08-1.02 FR JU JAF38:1050
 ETHYL-SUBERENOL 700 BK (RT) NAP
 ETROGOL RT NAP
 FARNESENE 2-7 FR BML
 FAT 1,100-16,000 FR CRC PED USA
 FERULIC-ACID 10-19 FR CRC(FSN)
 2'-TRANS-O-FERULOYL-GALACTARIC-ACID PE NAP
 2-TRANS-O-FERULOYL-GLUCARIC-ACID PE NAP
 FERULOYL-PUTRESCINE 0-5 FR HUL
 FIBER 3,740-47,000 FR CRC PED USA
 FLAVOXANTHIN PE NAP
 FLUORINE 0.04-0.76 FR AAS
 FOLACIN 0-2 FR USA
 FRUCTOSE 23,800 FR HUL
 GALACTAN FR HUL
 GALACTOSE FR HUL
 GALACTURONIC-ACID FR HUL
 GERANIAL 6-350 FR BML HUL
 GERANIOL 0-50 FR BML HUL
 GERANYL-OXY-PYRANOCOUMARIN RT NAP
 GLUCOSAN FR HUL
 GLUCOSE 23,600 FR HUL
 GLUTAMIC-ACID 60-7,097 FR USA HUL
 GLUTAMINE 30-630 FR HUL
 GLYCINE 50-7,097 FR USA HUL
 HEPTANAL 3-5 FR BML
 3,3',4,5,6,7,8-HEPTAMETHOXY-FLAVONE FR NAP
 HEPTULOSE FR HUL
 HESPERIDIN 40,600-63,500 PE NAP
 HESPERIDIN-7-O-ALPHA-L-RHAMNO-GLUCOSIDE FR NAP
 HEXANAL 0.02-0.65 FR JU JAF38:1050
 HEXANAL 1-2 FR BML
 HEXANOL 0.02-0.22 FR JU JAF38:1050
 TRANS-2-HEXENOL 0-0.1 FR JU JAF38:1050
 HISTIDINE 180-1,359 FR USA
 HORDENINE 0 FR HUL
 P-HYDROQUINONE 80 BK (RT) nAP
 ALPHA-HYDROXY-CAROTENE PE NAP
 3-HYDROXY-ETHYL-HEXANOATE FR NAP
 HYDROXYPROLINE LF NAP
 IRON 1-8 (-55) FR CRC USA 1/
 ISOCAPRIOC-ACID (SIC) FR HUL
 ISOLEUCINE 250-1,888 FR USA
 ISOLUTEIN PE NAP
 ISOPENTENYL-PSORALENS FR HUL
 ISOPRENE EO NAP
 ISORHOIFOLIN PE NAP
 ISOSAKURANETIN FR HUL
 JASMONIC-ACID FR NAP
 LEAD 0.02-1.1 FR USG 1/
 LEUCINE 230-1,136 FR USA
 LIMONENE 1-278 FR JU JAF38:1050
 LIMONENE 8,300-9,700 FR BML
 LIMONEXIC-ACID FR HUL
 LIMONIN FR NAP
 LIMONOATE-A-RING-LACTONE FR NAP
 LINALOOL 0.15-4.69 FR JU JAF38:1050
 LINALOOL 30-530 FR BML
 LINOLEIC-ACID 180-1,359 FR USA
 ALPHA-LINOLENIC-ACID 70-528 FR USA
 LITHIUM 0.108-1.54 FR USG 1/
 LOCHNOCARPOL-A RT NAP
 LUTEIN 0-3 FR HUL JAF37:657
 LUTEOLIN-7-O-ALPHA-L-RHAMNO-GLUCOSIDE FR NAP
 LUTEOLIN-7-O-BETA-D-RUTINOSIDE LF NAP
 LUTEOXANTHINS 0-6 FR HUL
 LYSINE 470-3,548 FR USA
 MAGNESIUM 98-1,075 (-1,650) FR AAS USA USG 1/
 MALIC-ACID 600-2,000 FR HUL
 MALONIC-ACID R HUL
 MANGANESE 0-8 FR USA USG 1/
 MANNOSE FR HUL
 MERANZINE FR HUL
 MERCURY 0.00027-0.00055 FR USG 1/
 METHANOL 0.8-80 FR JU JAF38:1050
 METHIONINE 200-1,510 FR USA
 3-METHYL-BUTAN-1-OL FR NAP
 3-METHYL-BUT-1-ENE EO NAP
 4-(3-METHYL-2-BUTENOXY)-ISO-NITROSO-ACETOPHENONE 48 PE NAP
 METHYL-BUTYRATE 0.01-0.1 FR JU JAF38:1050

- 2-METHYL-1-PROPANOL 0-0.07 FR JU
JAF38:1050
- N-METHYL-TYRAMINE 0-2 FR HUL
- MEVALONIC-ACID 0.5 FR NAP
- MEVALONIC-ACID 6 PE NAP
- MOLYBDENUM <0.1-0.385 FR AAS
USG 1/
- MUTATOXANTHIN 2 FR HUL
- MYRCENE 69-210 FR BML HUL
- NARINGENIN 35,000-45,800 PE NAP
- NARINGENIN-RUTINOSIDE FR HUL
- NARINGENIN-RUTINOSIDE-4-BETA-D-
GLUCOSIDE FR HUL
- NARINGENIN-4-BETA-D-GLUCOSIDE
- NARINGIN FR NAP
- NARINGIN-7-O-ALPHA-L-RHAMNO-
GLUCOSIDE
FR NAP
- NARIRUTIN PE NAP
- NEO-BETA-CAROTENE PE NAP
- NEOCHROME-A PE NAP
- NEOCHROME-B PE NAP
- NEOHESPERIDIN 28,000 PE NAP
- NEOHESPERIDIN-DIHYDROCHALCONE
PE NAP
- NEOPONCIRIN PE NAP
- NEOXANTHIN-A PE NAP
- NEOXANTHIN-B PE NAP
- NERAL 1-20 FR BML
- NERYL-ACETATE 10 FR BML
- NERYL-FORMATE 10 FR BML
- NEUROSPORIN PE NAP
- NIACIN 2-31 FR CRC PED USA HUL
- NICKEL 0.01-0.55 FR AAS USG
- NITROGEN 500-13,845 FR AAS HUL
- NOBELITIN FR HUL
- NOMILIN SD NAP
- NONANAL 6-20 FR BML
- NONANOL 10 FR BML
- NOOTKATOL FR NAP
- NOOTKATONE 1 FR BML
- NORDENTATIN 300 BK (RT) NAP
- OBACUNONE SD NAP
- OCTANAL 0-0.28 FR JU JAF38:1050
- OCTAN-1-AL FR NAP
- OCTANAL 20-280 FR BML
- OCTOPAMINE 0-1 FR HUL
- OCTYL-ACETATE 10 FR BML
- OLEIC-ACID 20-1,510 FR USA
- OSTHOL RT NAP
- OXALIC-ACID 87 FR WBB
- PALMITIC-ACID 130-982 FR USA
- PALMITOLEIC-ACID 30-226 FR USA
- PANTOTHENIC-ACID 2-19 FR USA
- PECTIN 1,300-5,900 FR HUL
- PECTINESTERASE FR NAP
- PERILLALDEHYDE 2 FR BML
- PHENYLALANINE 310-2,340 FR USA
- PHOSPHORUS 136-1,980 FR CRC USA
USG
- PHYTOENE 0-2 FR HUL
- PHYTOFLUENE 0-4 FR HUL
- ALPHA-PINENE TR-0.22 FR JU
JAF38:1050
- ALPHA-PINENE 10-60 FR BML
- POLYGALACTURONIC-ACID FR HUL
- PONCITRIN RT NAP
- POTASSIUM 1,400-13,772 (-23,100) FR
AAS CRC USA
- PROLINE 60-3,473 FR USA HUL
- PROPIONIC-ACID
- PROTEIN 9,260-78,000 FR CRC PED USA
- QUINIC-ACID FR HUL
- RIBOFLAVIN 0-3 FR CRC USA
- RUBIDIUM 0.1-7.7 FR AAS
- RUTIN 6,100 PE NAP
- RUTIN 9,000 LF NAP
- SABINENE 0-0.15 FR JU JAF38:1050
- SABINENE 10-60 FR BML
- SCOPARONE BK NAP
- SCUTELLAREIN FR NAP
- SELENIUM 0.000135-0.0022 FR USG
- SERINE 40-2,410 FR USA HUL
- SESELIN RT NAP
- SESLIN RT NAP
- SILICON <2 FR AAS
- SILVER 0.027-0.055 FR USG
- SINAPIC-ACID 7-19 FR CRC(FSN)
- ALPHA-SINESAL 3 FR BML
- BETA-SINESAL 6 FR BML
- SINENSIAXANTHIN FR HUL
- SINENSETIN FR HUL
- BETA-SITOSTEROL FR NAP
- SODIUM 0-29 (-660) FR CRC HUL USG 1/
- STACHYDRINE FR HUL
- STIGMASTEROL FR NAP
- STRONTIUM 0.054-110 FR USG 1/
- SUBERENOL 700 BK (RT) NAP
- SUBEROSIN RT NAP
- SUCCINIC-ACID FR HUL
- SUCROSE 47,000 FR HUL
- SUGARS 39,600-119,800 FR HUL
- SULFUR 46-1,000 FR AAS USG
- SYNEPHRINE 15-43 FR HUL
- TANGERETIN FR HUL
- TERPINEN-4-OL 6-550 FR BML HUL
- GAMMA-TERPINENE 0.04-0.46 FR JU
JAF38:1050

GAMMA-TERPINENE 10 FR BML
 ALPHA-TERPINEOL 0.09-1.1 FR JU
 JAF38:1050
 ALPHA-TERPINEOL 10-50 FR BML
 TERPINOLENE 10 FR BML
 TETRADECANAL 5-9 FR BML
 TETRA-O-METHYL-SCUTELLAREIN FR
 HUL
 THIAMIN 1-7 FR CRC USA
 THREONINE 150-1,132 FR USA
 TITANIUM 0.135-3.85 FR USG 1
 ALPHA-TOCOPHEROL 4-29 FR TOT
 TRYPTOPHAN 90-680 FR USA
 TYRAMINE 0-1 FR HUL
 TYROSINE 160-1,208 FR USA
 URONIC-ACID FR HUL
 VALENCENE 0.04-15.30 FR JU
 JAF38:1050
 VALENCENE 10-20 FR BML
 VALENCIACHROME 0 FR HUL
 VALENCIAXANTHIN 3 FR HUL
 VALENCENE FR NAP
 VALENCIC-ACID RT NAP
 VALINE 100-3,020 FR USA HUL
 VIOLAXANTHIN FR HUL
 VIT-B6 1-5 FR USA
 VITEXIN-XYLOSIDE FR NAP
 WATER 839,000-898,000 FR USG
 XANTHOXYLETIN 24,000 BK (RT) NAP
 XANTHYLETIN 45,000 BK (RT) NAP
 XYLAN FR HUL
 XYLOSE FR HUL
 XYLOSYL-VITEXIN LF NAP
 BETA-ZEACAROTENE PE NAP
 ZEAXANTHIN 2 FR HUL
 ZINC 0.9-13 FR AAS USA
 ZIRCONIUM 0.5-1.1 FR USG 1/

1/USG=US GEOL. SERVICE DATA
 AAS=ACTA AGRIC SCAND SUPPL
 22:1980 H20=87%; ZMB=7.7 X APB

CITRUS X PARADISI MacFAD.

"GRAPEFRUIT"

ACETIC ACID FR GEO
 AESCULETIN FR NAP
 ALANINE 90 FR HUL 1/
 ALUMINUM <1-330 FR AAS USG
 ALPHA-AMINO-BUTYRIC-ACID
 190 FR 1/
 APIGENIN-7-O-BETA-D-RUTINOSIDE 5
 LF NAP
 ARABAN FR 1/

ARGININE 470-760 FR 1/
 ARSENIC 0.0011-4.4 FR USG
 ASCORBIC-ACID 337-3,862 FR CRC USA
 ASH 3,050-53,000 (-110,000) FR CRC USA
 ASPARAGINE 420 FR 1/
 ASPARTIC-ACID 810-4,700 FR 1/
 BARIUM 0.44-22 FR USG
 BERGAMOTTIN PE NAP
 BERGAPTOL FR NAP
 BORON 1-33 FR AAS USG
 BRAYLIN RT NAP
 BROMINE <1 FR AAS
 D-CADINENE
 CADMIUM <0.002-0.066 FR AAS USG
 CAFFEIC-ACID 40-51 FR CRC(FSN)
 CAFFEINE 29 FL NAP
 CALCIUM 117-4,270 (-11,000) FR AAS
 CRC USA
 CAMPESTEROL FR NAP
 CARBOHYDRATES 80,800-948,000 FR
 CRC PED USA
 ALPHA-CAROTENE FR NAP
 BETA-CAROTENE 0-5 FR CRC USA
 GAMMA-CAROTENE FR NAP
 PSI-CAROTENE
 ZETA-CAROTENE FR 1/
 CARYOPHYLLENE FR NAP
 CHALCONASE FR 1/
 CHLORINE 6
 CHOLESTEROL FR NAP
 CHROMIUM 0.002-0.55 FR AAS USG
 CITRAL FR GEO
 CITRIC-ACID 11,900-21,000 FR 1/
 CITROSTADIENOL PE NAP
 COBALT <0.005-0.22 FR AAS USG
 CONIFERIN PE NAP
 COPPER 0-7.7 FR USA USG
 P-COUMARIC-ACID 0-53 FR CRC(FSN)
 CRYPTOXANTHIN 0.03-0.3 FR JAF37;657
 CYCLOARTENOL PE NAP
 CYCLOEUCALENOL PE NAP
 (+)-ALPHA-CYPERONE FR NAP
 CYSTINE 2 FR 1/
 DEACETYL-NOMILIN SD NAP
 DEACETYL-NOMILINIC-ACID-17-O-
 BETA-D-GLUCOSIDE SD NAP
 DECYL-ALDEHYDE FR GEO
 DECYLIC-ACID FR GEO
 DEOXY-LIMONOL 8 SD NAP
 (+)-8,9-DIDEHYDRO-NOOTKATONE FR
 NAP
 (+)-8,9-DIDEHYDRO-ALPHA-VETTIVONE
 FR NAP
 5,6-DIHYDROERGOSTEROL PL JSG

- DIHYDROKAEMPFEROL FR NAP
 1,10-DIHYDRO-ALPHA-VETIVONE FR NAP
 5-(6,7-DIHYDROXY-3,7-DIMETHYL-2-OCTENYL)-OXYPSORALEN PE NAP
 4',5-DIHYDROXY-FLAVONONE-7-O-BETA-D-RHAMNOSYL-GLUCOSIDE FR NAP
 7-(3,7-DIMETHYL-6-EPOXY-OCT-TRANS-2-ENYL)-OXYCOUMARIN PE NAP
 5-(3,7-DIMETHYL-6-EPOXY-2-OCTENYL)-OXYPSORALEN PE NAP
 N-DODECASANE FR NAP
 N-DORIACONTANE FR NAP
 N-EICOSANE FR NAP
 EO 6,000-10,000 FR GEO
 (-)-10-EPI-ALPHA-CYPERONE FR NAP
 EPI-ISO-OBACUNOIC-ACID-17-O-BETA-D-GLUCOSIDE SD NAP
 ERIODICTYOL FR NAP
 3,7(11)-EUDESMADIEN-2-ONE PL JSG
 FAT 1,000-19,000 FR CRC USA
 FERULIC-ACID 30-34 FR CRC(FSN)
 FERULOYL-PUTRESINE 15-41
 FIBER 2,000-44,000 (-172,000) CRC USA (PED)
 FLUORINE 0.03-0.9 FR AAS
 FRIEDELIN PE NAP
 FRUCTOSE 12,400
 GALACTAN
 GALACTURONIC-ACID FR
 GERANIAL FR 420-700 FR GEO
 GERANIOL
 7-GERANYL-OXYCOUMARIN PE NAP
 GERANYL-OXYPYRANOCOUMARIN RT NAP
 GERANYL-ACETATE FR GEO
 2-H-1:8(3-BETA-D-GLUCOPYRANOSYL-OXY-2-HYDROXY-3-METHYL-BUTYL)-7-METHOXY-BENZOPYRAN-2-ONE
 GLUCOSAN
 GLUCOSE 19,500 FR
 GLUTAMIC-ACID 220-2,800 FR 1/
 GLYCINE FR
 N-HENEICOSANE FR NAP
 N-HENTRIACONTANE FR NAP
 N-HEPTACOSANE FR NAP
 HEPTULOSE PEEL
 HESPERETIN FR NAP
 HESPERIDIN FR 1/
 N-HEXACOSANE FR NAP
 3',4',5,6,7,8-HEXAMETHOXYFLAVONE PE NAP
 HISTIDINE 140 FR 1/
 HORDENENE 0 FR 1/
 HUMULENE FR NAP
 3-HYDROXY-ETHYL-HEXANOATE FR NAP
 5-HYDROXY-4'-METHOXY-FLAVANONE-7-O-BETA-D-RHAMNOSYL-GLUCOSIDE FR NAP
 IRON 1-88 FR CRC USA
 ISOMERANZIN PE NAP
 ISO-OBACUNOIC-ACID-17-O-BETA-D-GLUCOSIDE SD NAP
 (+)-6-ISO-PROPENYL-4,8-ALPHA-DIMETHYL-4-ALPHA-(R)-5,6-(R)-7,8,8-ALPHA(R)-HEXAHYDRO-2-(1H)NAPHTHALENONE FR NAP
 ISORHAMNETIN FR NAP
 ISORHOIFOLIN LF NAP
 ISOSAKURANETIN FR 1/
 KAEMPFEROL FR NAP
 KILOCALORIES 1,724 FR PED (SEEMS LOW)
 LEAD 0.02-7.7 FR AAS USG
 LEUCINES 240 FR 1/
 LIMONIN 9-140
 D-LIMONENE 9,000 GEO
 LIMONIN FR NAP
 LIMONOATE-A-RING-LACTONE FR NAP
 LIMONOL 23 SD NAP
 LINALOOL FR GEO
 CIS-LINALOOL-OXIDE FR NAP
 LINALYL-ACETATE FR GEO
 LINOLEIC-ACID 190-2,090 FR USA
 ALPHA-LINOLENIC-ACID 50-550 FR USA
 LITHIUM 0.088-2.31 FR USG
 LUTEIN 0.095-0.95 FR JAF37;657
 LYCOPENE FR NAP
 LYSINE 160-1,760 FR 1/
 MAGNESIUM 15-1,360 (-3,300) FR AAS USA
 MALIC-ACID 400-600 FR 1/
 MALONIC-ACID FR 1/
 MANGANESE 0-5 (-7.7) FR AAS USA
 MANNOSE FE 1/
 P-MENTH-1-ENE-8-THIOL FR NAP
 MERANZIN PE NAP
 MERANZIN-HYDRATE PE NAP
 MERCURY 0.00022-0.0011 FR USG
 METHIONINE 3-222 FR USA 1/
 7-METHOXY-8(2,3-DIHYDROXY-ISOPENTYL)-COUMARIN PE NAP

7-METHOXY-8(2,3-EPOXY-
 ISOPENTENYL)-COUMARIN PE NAP
 METHYL-ANTHRALINATE FR GEO
 24-METHYLENE-CYCLOARTENOL PE
 NAP
 24-METHYLENE-LOPHENOL PR NAP
 N-METHYL-TYRAMINE FR 1/
 MOLYBDENUM <0.1-0.77 FR AAS USG
 MYRCENE 72-190 FR 1/GEO
 NARINGENIN FR NAP
 NARINGENIN-RUTINOSIDE FR 1/
 NARINGENIN-7-BETA-(4-BETA-D-
 GLUCOSYL)-NEOHESPERIDOSIDE FR
 NAP
 NARINGENIN-7-BETA-(4-BETA-D-
 GLUCOSYL)-RUTINOSIDE FR NAP
 NARINGENIN-7-O-BETA-D-RUTINOSIDE
 FR NAP
 NARINGIN 245-195,000? FR NAP
 NARINGIN 4,500-14,000 PE NAP
 NARINGIN 200 SD NAP
 NARINGIN-4-BETA-D-GLUCOSIDE
 NARIRUTIN FR NAP
 NEOHESPERIDIN FR NAP
 NERAL 136-210 FR BML
 NEUROSPORENE FR NAP
 NIACIN 2-44 FR CRC USA
 NICKEL 0.04-7.7 FR AAS USG
 NITROGEN 990-16,360 FR AAS
 NOMILIN SD NAP
 NOMILINIC-ACID PL JSG
 NOMILINIC-ACID-17-O-BETA-D-
 GLUCOSIDE SD NAP
 N-NONACOSANE FR NAP
 N-NONYL-ALCOHOL FR GEO
 (+)-NOOTKATONE PL JSG
 TRANS-OBACUNOIC-ACID-17-O-BETA-
 D-GLUCOSIDE SD NAP
 7-OBACUNOL 8-9 SD NAP
 OBACUNONE SD NAP
 N-OCTACOSANE FR NAP
 OCTOPAMINE 0 1/
 N-OCTYL-ACETATE FR GEO
 N-OCTYL-ALCOHOL FR GEO
 OCTYL-ALDEHYDE FR GEO
 OCTYLIC-ACID FR GEO
 OLEIC-ACID 120-1,320 FR USA
 OSTHOL RT NAP
 OXALIC-ACID
 PALMITIC-ACID 120-1,320 FR USA
 PALMITOLEIC-ACID 10-110 FR USA
 PANTOTHENIC-ACID 3-31
 PARADISIOL FR NAP
 PECTIN FR NAP
 N-PENTACOSANE FR NAP
 4',5,6,7,8-PENTAMETHOXY-FLAVONE
 PE NAP
 PENTAN-1-OL FR NAP
 N-PENTATRIACONTANE PE NAP
 PHENYLALANINE FR 1/
 PHLOROGLUCINOL FR NAP
 PHOSPHORUS 76-2,545 (-5,280) FR AAS
 CRC USA
 PHYTOENE FR 1/
 PHYTOFLUENE FR 1/
 ALPHA-PINENE FR GEO
 POLYGALACTURONIC-ACID FR 1/
 PONCIRIN FR 1/
 PONCITRIN RT NAP
 POTASSIUM 1,300-16,360 (-46,200) FR
 AAS CRC USA
 PROLINE 590 FR 1/
 PROTEIN 6,000-70,290 FR CRC USA
 QUERCETIN FR NAP
 QUINIC-ACID FR 1/
 RHOIFOLIN LF NAP
 RIBOFLAVIN 0-5 FR CRC USA
 RUBIDIUM 0.26-22 FR AAS
 SCOPOLETIN FR NAP
 SELENIUM 0.0001-0.027 FR AAS USG
 SERINE 150-3,100 FR 1/
 SESELIN RT NAP
 SESLIN RT NAP
 SILICON <2 FR AAS
 SILVER 0.022-0.11 FR USG
 SINAPIC-ACID 4-5 FR CRC(FSN)
 BETA-SITOSTEROL FR 1/
 SODIUM 0-175 (-341) FR CRC USA USG
 STEARIC-ACID 10-110 FR USA
 STIGMASTEROL FR NAP
 STRONTIUM 3.3-220 FR USG
 SUBEROSIN RT NAP
 SUCROSE 21,400 FR 1/
 SUGARS 33,000-99,600 FR 1/
 SULFUR 7-2,090 FR AAS USG 1/
 SYNEPHERINE 0 FR 1/
 N-TETRACOSANE FR NAP
 4',5,6,7-TETRAHYDROXY-FLAVONE-8-O-
 BETA-D-GLUCOSIDE FR NAP
 N-TETRATRIACONTANE PE NAP
 THIAMIN 0-6 FR CRC USA
 THREONINE 100 FR 1/
 TIN 0.66-3.3 FR USG
 TITANIUM 0.11-7.7 FR USG
 ALPHA-TOCOPHEROL 3-29 FR TOT
 N-TRIACONTANE FR NAP
 4',5,7-TRIHYDROXY-FLAVONE-6-C-
 GLUCOSIDE FR NAP

TRYPTOPHAN 20-220 FR 1/USA
 TYRAMINE 0 FR 1/
 TYROSINE 61 FR 1/
 UMBELLIFERONE FR NAP
 URONIC-ACID FR 1/
 VALINE 240 FR 1/
 (+)-ALPHA-VETIVONE FR NAP
 WATER 847,000-930,000 FR USG
 XANTHOXYLETIN RT NAP
 XANTHYLETIN FR NAP
 XYLAN FR 1/
 XYLOSE FR 1/
 ZINC 0-9 (-22) FR AAS USA USG
 ZIRCONIUM 0.44-2.2 FR USG 2/

1/ Hulme's Biochemistry of Fruits
 2/USG= Shacklette et al. AAS=ACTA
 AGRIC SCAND SUPPL 22:1980
 H2O=89%; ZMB=9.09 X APB

CLEMATIS VITALBA L.

"TRAVELER'S JOY"

ANEMONIN PL HHB
 BEHENIC-ACID PL HHB
 CAFFEIC-ACID PL HHC
 CAMPESTEROL PL HHB
 CAULOSAPOGENIN PL HHB
 CERYL-ALCOHOL PL HHB
 CHLOROGENIC-ACID PL HHB
 CLEMATINE PL HHB
 CLEMATITOL PL HHB
 FAT 140,000 SD CRC
 GINNOL PL HHB
 GINNONE PL HHB
 MELISSIC-ACID PL HHB
 MYRICYL-ALCOHOL PL HHB
 N-NONACOSANE PL HHB
 PROTEIN 151,000 SD CRC
 PROTOANEMONIN PL HHB
 BETA-SITOSTEROL PL HHB
 STIGMASTEROL-GLYCOSIDE PL HHB
 N-TRIACONTANE PL HHB
 TRIMETHYLAMINE PL HHB
 VITALBOSIDES PL JSG

CNICUS BENEDICTUS L.

"BLESSED THISTLE"

2-ACETYLNORTRACHELOSIDE PL 411/
 ALUMINUM 85 PL PED
 ALPHA-AMYRIN PL HHB
 APIGENIN-7-GLYCOSIDE PL HHB
 ARCTIGENIN PL 411/

ARCTIIN SD HHB
 ASCORBIC-ACID 30 PL PED
 ASH 133,000 PL PED
 ASH 41,000 SD CRC
 BENEDICTINE PL HHB
 BENZOIC-ACID PL WICHTL
 CALCIUM 11,200 PL PED
 CARBOHYDRATES 760,000 PL PED
 BETA-CAROTENE 13.3 PL PED
 CERYL-ALCOHOL PL HHB
 CHROMIUM 16 PL PED
 CINNAMALDEHYDE PL WICHTL
 CITRAL EO WICHTL
 CNICIN PL HHB
 COBALT 38 PL PED
 P-CYMENE EO WICHTL
 DODECA-1,11-DIEN-3,5,7,9-TETRAIN
 EO 3,000 PL HHB
 FAT 11,000 PL PED
 FAT 258,000-271,000 SD CRC
 FENCHONE PL WICHTL
 FERULIC-ACID PL HHB
 FIBER 98,000 PL PED
 IRON 240 PL PED
 KAEMPFEROL-3-GLUCOSIDE PL HHB
 KILOCALORIES 2,520 PL PED
 LABIATIC-ACID PL AYL
 LINOLEIC-ACID 56,160-65,520 SD HHB
 LITHOSPERMIC-ACID FR 411/
 LUTEOLIN PL HHB
 LUTEOLIN-DIGLUCOSIDE PL HHB
 MAGNESIUM 1,770 PL PED
 MANGANESE 21 PL PED
 MUCILAGE 120,000-200,000 PL PED
 NIACIN 3.1 PL PED
 N-NONACOSANE PL HHB
 NORTRACHELOSIDE FR 411/
 OLEANOLIC-ACID PL AYL
 OLEIC-ACID 159,840-186,480 SD HHB
 PHOSPHORUS 2,700 PL PED
 POTASSIUM 26,000 PL PED
 PROTEIN 96,000 PL PED
 PROTEIN 138,000-175,000 SD CRC
 RIBOFLAVIN 2.1 PL PED
 SALONITENOLIDE FR 411/
 SELENIUM 34 PL PED
 SILICON TR PL PED
 BETA-SITOSTEROL PL HHB
 SODIUM 1,220 PL PED
 STEROL PL HHB
 STIGMASTEROL PL HHB
 TANNIN 80,000 PL HHB
 THIAMIN 2.7 PL PED
 TIN 25 PL PED

TRACHELOGENIN FR 411/
WATER 867,000 PL PED
ZINC TR PL PED

1/ where two compounds were aggregated, I
split the totals and scored accordingly.

CNIDIUM OFFICINALE MAKINO

“JIH-CHIUNG” 1/

BUTYLIDENPHTHALIDE RH CCO
BUTYLPHTHALIDE RH CCO
CALCIUM 1,710 RH SMO
CNIDILIDE RH CCO
CNIDIUM-LACTONE RH CCO
COPPER 9 RH SMO
EO 10,000-20,000 RH CCO
D-FRUCTOSE RH CCO
D-GLUCOSE RH CCO
IRON 240 RH SMO
LIGUSTILIDE RH CCO
MAGNESIUM 850 RH SMO
MANGANESE 30 RH SMO
NEOCNIDILIDE RH CCO
POTASSIUM 8,750 RH SMO
SEDANOLIDE RH CCO
SEDANONIC-ACID-ANHYDRIDE RH
CCO
SENKYUNOLIDE RH CCO
SODIUM 185 RH SMO
SUCROSE RH CCO
ZINC 16 RH SMO

1/ SMO mineral data may apply to Ligustrum
(see Oriental Materia Medica)

CNIDOSCOLUS CHAYAMANSA McVAUGH

“CHAYA”

ALANINE 2,850-14,260 LF USA
ARGININE 6,945-34,720 LF USA
ASCORBIC-ACID 1,960-12,200 LF USA
ASPARTIC-ACID 8,495-42,470 LF USA
ASH 17,000-130,000 LF USA
CALCIUM 2,260-21,050 LF USA
CARBOHYDRATES 61,000-305,000 LF
USA
BETA-CAROTENE 60-425 LF USA
CYSTINE 1,055-5,270 LF USA
FAT 16,000-80,000 LF USA
FIBER 19,000-130,000 LF USA
GLUTAMIC-ACID 11,780-58,900 LF USA
GLYCINE 2,170-10,850 LF USA

IRON 50-600 LF USA
ISOLEUCINE 1,920-9,610
LEUCINE 3,600-17,980 LF USA
LYSINE 3,040-15,190 LF USA
METHIONINE 745-3,720 LF USA
NIACIN 2-85 LF USA
PHENYLALANINE 3,720-18,600 LF USA
PHOSPHORUS 540-4,100 LF USA
PROLINE 620-3,100 LF USA
PROTEIN 62,000-310,000 LF USA
RIBOFLAVIN 3-25 LF USA
SERINE 2,045-10,230 LF USA
THIAMIN 2-15 LF USA
THREONINE 2,045-10,230 LF USA
TYROSINE 2,170-10,850 LF USA
VALINE 3,040-15,190 LF USA
WATER 764,000-811,000 LF USA

USA here = Part 3.Chaya. Vegetables for the
hot humid tropics (Martin & Ruberte)
Figures multiplied by 5 for ZMB.

COCOS NUCIFERA L.

“COCONUT”

ACETOSYRINGONE LF HHB
ACETOVANILLONE LF HHB
ALUMINUM 7.2 SD FUR 1/
ANTIMONY 0.1 SD FUR
ARSENIC 0.02 SD FUR
ASCORBIC-ACID 20-88 CRC
ASH 9,000-22,000 SD CRC
BARIUM 0.1 SD FUR
BORON 3-5.2 SD FUR JFS51:523
BROMINE 4.0 SD FUR
CADMIUM 0.03 SD FUR
CALCIUM 71-476 SD CRC FUR WOI
CALCIUM-OXIDE 2,700 LF WOI
CAPRIC-ACID 2,628-69,743 SD WOI
CAPROIC-ACID 117-3,595 SD WOI
CAPRYLIC-ACID 3,154-68,305 SD WOI
CARBOHYDRATES 94,000-331,000 SD
CRC WOI
CELLULOSE 266,000 HU WOI
CESIUM 0.1 SD FUR
CHLORINE 1,007 SD FUR
CHROMIUM 0.2 SD FUR
CITRIC-ACID SD HHB
COBALT 0.2 SD FUR
COPPER 3.2-33 SD FUR WOI
P-COUMARIC-ACID LF HHB
1,3-DIPHENYLUREA? SD HHB
EUROPIUM 0.1 SD FUR
FAT 58,400-719,000 SD CRC WOI

FERULIC-ACID LF HHB
 FIBER 30,000-115,000 SD CRC WOI
 FLUORINE 2.7 SD FUR
 FRUCTOSE 2,100 SAP HHB
 GABA SD HHB
 GALACTOMANNAN 16,000 SD HHB
 D-GALACTOSE SD HHB
 D-GALACTURONIC-ACID SD HHB
 GLUCOSE 2,400 SAP HHB
 GOLD
 P-HYDROXYBENZOIC-ACID LF HHB
 INOSITOL 690 SAP HHB
 IODINE 0.3 SD FUR
 IRON 23-33 SD JFS51:523
 KILOCALORIES 2,960-7,050 SD CRC
 LANTHANUM 0.03 SD FUR
 LAURIC-ACID 25,754-368,847 SD WOI
 LEAD 0.7 SD FUR
 LIGNIN 294,000 HU WOI
 LINOLEIC-ACID 584-18,694 SD WOI
 LUTETIUM 0.01 SD FUR
 MAGNESIUM 770 SD FUR
 MAGNESIUM-OXIDE 5,700 LF WOI
 MALIC-ACID SD HHB
 MANGANESE 9-21 SD FUR JFS51:523
 MANNAN SD HHB
 MERCURY 0.1 SD FUR
 MESOINOSITOL 100 WA 1/ HHB
 METHOXYL 56,000 HU WOI
 MOLYBDENUM 0.03 SD FUR
 MYRISTIC-ACID 7,650-133,015 SD WOI
 NIACIN 5-10 SD CRC
 NICKEL 2.1 SD FUR
 NITROGEN 1,100 HU WOI
 OLEIC-ACID 2,920-58,958 SD WOI
 PALMITIC-ACID 4,380-75,495 SD FNF
 WOI
 PECTIN SD HHB
 PENTOSANS 277,000 HU WOI
 PHOSPHORUS 830-2,400 SD CRC WOI
 PHOSPHORUS-OXIDE-(P2O5) 1,700 LF
 WOI
 PHYTOSTEROLS SD WOI
 POTASSIUM 2,560-11,491 SD CRC FUR
 POTASSIUM-OXIDE-(K2O) 52,300 LF
 WOI
 PROTEIN 32,000-77,000 SD CRC WOI
 QUINIC-ACID SD HHB
 RAFFINOSE 900 SAP HHB
 L-RHAMNOSE SD HHB
 RIBOFLAVIN 0.2-0.7 SD CRC
 RUBIDIUM 16 SD FUR
 SAMARIUM 0.04 SD FUR
 SCANDIUM 0.002 SD FUR

SCYLLITOL 3,200 LF HHB
 SCYLLITOL 500 WA 2/ HHB
 SELENIUM 0.02 SD FUR
 SHIKIMIC-ACID SD HHB
 SILICON 370 SD FUR
 SODIUM 145-626 SD CRC FUR
 SORBITOL 15,000 WA 2/
 SQUALENE SD WOI
 STEARIC-ACID 584-23,008 SD FNF WOI
 STRONTIUM 2.8 SD FUR
 SUCCINIC-ACID SD HHB
 SUCROSE 134,000 SAP HHB
 SULFUR 440-1,370 SD WOI JFS51:523
 SYRINGALDEHYDE LF HHB
 SYRINGIC-ACID LF HHB
 TANTALUM
 THIAMIN 0.3-1.0 SD CRC
 THORIUM
 TIN 1.5 SD FUR
 TITANIUM 5.6 SD FUR
 ALPHA-TOCOPHEROL 18 OI TOT
 GAMMA-TOCOPHEROL TR OI TOT
 TRIDECANOIC-ACID SD WOI
 TUNGSTEN 0.3 SD FUR
 UNDECANOIC-ACID SD WOI
 URONIC-ANHYDRIDES 35,000 HU WOI
 VANADIUM 0.004 SD FUR
 VANILLIC-ACID LF HHB
 VANILLIN LF HHB
 VIT-E 2 SD WOI
 WATER 363,000-546,000 SD CRC WOI
 WATER 80,000 HU WOI
 WATER 84,500 LF WOI
 YTTERBIUM 0.1 SD FUR
 ZINC 13-17 SD FUR 1/ JFS51:523

1/ Fur=A.K.Furr et al, 1979.

COFFEA ARABICA L.

"COFFEE"

ACETALDEHYDE
 ADENINE
 ALLANTOIC-ACID LF HHB
 ALLANTOIN LF HHB
 ARABINOGALACTOSE
 ARABINOSE
 ARACHIDIC-ACID
 ASPARAGINE
 ASPARTIC-ACID
 ASH 37,400
 5-AVENASTEROL SD CRC
 CAFESTOL SD AYL
 CAFESTEROL SD

CAFFEIC-ACID LF HHB
 CAFFEINE 600-32,000 SD CRC WOI 411/
 CAFFEOL
 CAFFEYL-3-QUINIC-ACID
 CAFFETANNIC-ACID 84,600 SD WOI
 CAHWEOL
 CALCIUM 1,200-1,281 SD CRC
 CALCIUM 19,000-20,406 LF CRC
 CAMOESTANOL SD HHB
 CAMPESTEROL SD HHB
 CAPRINIC-ACID
 CARBOHYDRATES 600,000-728,000 SD
 WOI
 CARBOHYDRATES 666,000-712,000 LF
 WOI
 CARNAUBIC-ACID
 BETA-CAROTENE 20-25 LF CRC
 CELLULOSE
 CHLOROGENIC-ACID 50,000-100,000 SD
 HHB
 CHOLESTEROL
 CHOLESTANOL
 CHOLINE 300 SD WOI
 CITRIC-ACID
 CITROSTADIENOL
 COFFEASTEROL
 P-COUMARIC-ACID PL JLS58:160
 M-CRESOL SD CRC(FNS)
 O-CRESOL SD CRC(FNS)
 P-CRESOL SD CRC(FNS)
 CYANIDIN PL JLS58:160
 CYCLOEUCALENOL
 CYSTEINE
 CYSTINE
 DATURIC-ACID
 DEXTRINS 8,700 SD
 3,4-DICAFFEYL-QUINIC-ACID
 4,5-DICAFFEYL-QUINIC-ACID
 3,5-DICAFFEYL-QUINIC-ACID
 DIHYDROLANASTEROL
 DIHYDROSITOSTEROL
 DIMETHYL-5-ALPHA-CHOLEST-7-EN-3-
 BETA-OL
 DIMETHYL-5-ALPHA-CHOLEST-8-EN-3-
 BETA-OL
 ENT-16-KAUREN-19-OL PL JSG
 EO 1,000-2,000
 2-ETHYLPHENOL SD CRC(FNS)
 4-ETHYLPHENOL SD CRC(FNS)
 EUGENOL SD CRC(FNS)
 FAT 74,000-170,000 SD CRC WOI
 FAT 55,000-59,000 LF CRC
 FIBER 229,000-244,000 SD CRC
 FIBER 175,000-187,000 LF CRC
 FURFURALDEHYDE SD WOI
 FUFURYL-ALCOHOL SD WOI
 GALACTAN
 GALACTOMANNAN
 GLUCOGALACTOMANNAN
 GUAIACOL SD CRC
 GUANOSINE
 HEMICELLULOSE
 HOMOCELLULOSE
 HYDROGEN-SULFIDE
 HYPOXANTHINE
 IRON 29-31 SD CRC
 IRON 966-1,032 LF CRC
 ISOCHLOROGENIC-ACID
 ISOEUGENOL SD CRC(FNS)
 LANOSTEROL
 LIGNOCERIC-ACID
 LINOLEIC-ACID
 LINOLENIC-ACID 33,300-72,000 SD WOI
 MANNAN
 MANNOSE
 METHIONINE
 2-METHOXY-4-ETHYLPHENOL SD
 CRC(FNS)
 4-METHOXY-4-VINYLPHENOL SD
 CRC(FNS)
 METHYL-1-5-ALPHA-STIGMAST-7-EN-3-
 BETA-OL
 24-METHYLENECYCLOARTENOL
 24-METHYLENEPHENOL
 MYRISTIC-ACID
 NIACIN 13-14 SD CRC
 NIACIN 52-56 LF CRC
 NITROGEN 16,000-23,000 SD WOI
 N-NONACOSANE
 OBTUSIFOLIOL
 OLEIC-ACID 5,920-12,800
 OXALIC-ACID 154 FR? WBB
 PALMITIC-ACID 23,680 SD
 PECTIN
 PENTOSANS
 PENTOSANE
 PHOSPHORUS 1,780-1,900 SD CRC
 PHOSPHORUS 1,700-1,816 LF CRC
 PROTEIN 98,700-140,000 SD WOI
 PROTEIN 99,000 LF CRC
 PUTRESCINE SD AYL
 RAFFINOSE
 RHAMNOSE
 RIBOFLAVIN 1 SD CRC
 RIBOFLAVIN 2 LF CRC
 SACCHAROSE
 SCOPOLETIC
 SINAPIC-ACID PL JLS58:160

GAMMA-SITOSTEROL
 SPERMIDINE SD AYL
 SPERMINE SD AYL
 SQUALENE SD HHB
 STACHYOSE
 STEARIC-ACID 5,920-12,800
 STIGMASTEROL
 7-STIGMASTEROL SD
 SUGAR 4,300 SD WOI
 TANNIC-ACID
 TANNIN 90,000 SD
 TETRACOSIC-ACID SD WOI
 THEOBROMINE 18 SD HHB
 THEOBROMINE LF
 THEOPHYLLINE SD HHB
 THEOPHYLLINE LF
 THIAMIN 2 SD CRC
 ALPHA-TOCOPHEROL
 BETA-TOCOPHEROL
 GAMMA-TOCOPHEROL
 2,3,5-TRIMETHYLPHENOL SD CRC(FNS)
 TRIGONELLINE 3,000-13,000 SD HHB
 WATER 60,000-100,000 SD CRC WOI
 WAX 10,000-14,000 SD WOI
 XANTHINE
 XYLAN
 O-XYLENOL SD CRC(FNS)
 P-XYLENOL SD CRC(FNS)

NOTE: Entries were assumed to be seed
 unless otherwise indicated.

COIX LACRYMA-JOBI L.

“JOB’S-TEARS; ADLAY; ADLAY
 MILLET; I-YI-JEN; YI-YI-REN”

ASCORBIC-ACID 0 SD CRC
 CALCIUM 50-282 SD CRC SMO WOI
 CAMPESTEROL SD CCO
 CARBOHYDRATES 798,000 PL CRC
 CARBOHYDRATES 653,000-824,000 SD
 CRC WOI
 BETA-CAROTENE 0 SD CRC
 COICIN SD WOI
 COIXENOLIDE SD CCO
 COIXOL 1,600 RT HHB
 COIXOL 1,300 ST HHB
 COPPER 5 SD SMO
 2-(2,4-DIHYDROXY-7-METHOXY...BETA-
 D-GLUCOPYRANOSIDE SP HHB
 FAT 28,000 PL WOI
 FAT 31,000-79,000 SD CCO CRC WOI
 FIBER 279,000 PL CRC

FIBER 2,900-170,000 SD CRC WOI
 2-O-GLUCOSYL-7-METHOXY-1,4(2H)-
 BENZOXAZIN-3-ONE RT CCO
 2-HYDROXY-7-METHOXY-1,4(2H)-
 BENZOXAZIN-3-ONE RT CCO
 2-(2-HYDROXY-7-METHOXY-
 1,4(2H)...GLUCOPYRANOSIDE SP HHB
 IRON 29-68 SD HHB SMO
 KILOCALORIES 3,330-4,280 SD CRC
 LINOLEIC-ACID SD CCO
 MAGNESIUM 1,490 SD SMO
 MANGANESE 26 SD SMO
 6-METHOXY-BENZOXAZOLON
 MYRISTIC-ACID SD CCO
 NIACIN 13-48 SD CRC
 CIS-8-OCTADECENOIC-ACID SD CCO
 PALMITIC-ACID RT HHB
 PHYTIN SD CCO
 PHOSPHORUS 500-5,000 SD CRC WOI
 POTASSIUM 2,360 SD SMO
 PROTEIN 85,000 PL CRC
 PROTEIN 81,000-262,000 SD CCO CRC
 WOI
 RIBOFLAVIN 0.6-2.1 SD CRC
 SAPONIN SD HHB
 BETA-SITOSTEROL RT HHB
 SODIUM 4 SD SMO
 STARCH 520,000 SD CCO
 STEARIC-ACID RT HHB
 STIGMASTEROL SD CCO
 THIAMIN 2.8-3.2 SD CRC
 WATER 89,000-113,000 SD CRC
 ZINC 20 SD SMO

COLA ACUMINATA (P. BEAUV.) SCHOTT & ENDL.

“ABATA COLA”

ASCORBIC-ACID 540-1,456 SD CRC
 BETAINE 2,500 SD
 CAFFEIC-ACID PL JLS58:141
 CAFFEINE 10,000-25,000 SD WBB
 CALCIUM 580-1,563 SD CRC
 CARBOHYDRATES 337,000-908,000 SD
 CRC
 BETA-CAROTENE 1 SD CRC
 D-CATECHIN 3,000-4,000 SD
 DL-CATECHIN
 CELLULOSE
 COLALIPASE
 COLAOXYDASE
 CYANIDIN PL JLS58:141
 L-EPICATECHIN

FAT 4,000-30,000 SD CRC W&B
 FIBER 14,000-30,000 SD CRC
 GUM 3,000 SD
 IRON 20-54 SD CRC
 KAEMPFEROL PL JLS58:141
 KOLANIN SD 411/
 KOLATEIN SD 411/
 KOLATIN SD 411/
 PHLOBAPHENE SD 411/
 PHOSPHORUS 860-2,318 SD CRC
 PROTEIN 22,000-67,000 SD CRC
 RIBOFLAVIN 1 SD CRC
 STARCH 340,000 SD CRC
 SUGAR 29,000
 TANNIN SD
 THEOBROMINE 1,000 SD CRC
 THIAMIN 1 SD CRC
 WATER 120,000-629,000 SD CRC

COLCHICUM AUTUMNALE L.

“AUTUMN CROCUS”

“MEADOW SAFFRON”

O-ACETYLCOCHICEINE PL JSG
 N-ACETYLDMECOLCINE PL JSG
 2-ACETYL-2-DEMETHYLCOLCHICINE
 PL JSG
 3-ACETYL-3-DEMETHYLCOLCHICINE
 PL JSG
 APIGENIN TU HHB
 AUTUMNALINE PL JSG
 BENZOIC-ACID TU HHB
 CHELIDONIC-ACID PL 411/
 COLCHAMINE TU ALK
 COLCHICENE TU HHB
 COLCHICERINE TU ALK
 COLCHICINE 800-12,300 TU HHB
 COLCHIFOLINE PL JSG
 N-DEACETYL-N-METHYLCOLCHICINE
 TU ALK
 DEMECOLCEINE PL HHB
 DEMECOLCINE PL ALK
 2-DEMETHYLCOLCHICINE TU ALK
 3-DEMETHYLCOLCHICINE TU ALK
 O-DEMETHYL-N-
 DEACETYLCOLCHICINE TU ALK
 3-DEMETHYL-BETA-LUMICOLCHICINE
 TU ALK
 3-DEMETHYL-GAMMA-
 LUMICOLCHICINE TU ALK
 3-DESMETHYLDMECOLCINE TU HHB
 2-DESMETHYLDEACETYLCOLCHICINE
 TU HHB

N-FORMYL-N-DEACETYLCOLCHICINE
 TU ALK
 2-HYDROXY-6-METHOXYBENZOIC-
 ACID TU HHB
 ALPHA-LUMICOLCHICINE TU ALK
 BETA-LUMICOLCHICINE TU ALK
 GAMMA-LUMICOLCHICINE TU ALK
 6-METHOXY-SALICYLIC-ACID TU HHB
 3-METHYL-COLCHICINE TU ALK
 N-METHYLDESACETYLCOLCHICINE
 TU HHB
 SALICYLIC-ACID PL 411/
 STARCH 210,000 TU HHB

COLEUS BARBATUS BENTH.

SYN: COLEUS FORSKOHLII BRIQ

“FORSKOHL'S COLEUS”

7BETA-ACETOXY-6BETA,9ALPHA-
 DIHYDROXY-8,13-EPOXY-LABD-14-
 EN-11-ONE PC29:821
 BARBATUSIN PL ABS
 BARBATUSOL LF RAA
 COLEOL PC29:821
 COLEONS PL JSG
 COLEONOLS TU EB41:474
 COLEOSOL PL JSG
 CYCLOBUTATUSIN LF RAA
 DEACETYL-FORSKOHLIN PC29:821
 20-DEOXOCARNOSOL ST PC23:1677
 9-DEOXYFORSKOHLIN PC29:821
 1,9-DIDEOXY-7-DEACETYL-
 FORSKOHLIN PC29:821
 1,9-DIDEOXYFORSKOHLIN PC29:821
 8,13-EPOXY-LABD-14-EN-11-ONE PL
 PC29:821
 (+)-FERRUGINOL LF RAA
 FORSKOLIN 4,630 TU EB41:474
 6BETA-HYDROXY-CARNOSOL LF RAA
 3BETA-HYDROXY-3-
 DEOXYBARBATUSIN LF EB41:474
 6BETA-HYDROXY-8,13-EPOXY-LABD-
 14-EN-11-ONE PL PC29:821
 6BETA,7BETA,9ALPHA-TRIHYDROXY-
 8,13-EPOXY-LABD-14-EN-11-ONE PL
 PC29:821

COLEUS BLUMEI BENTH.

“EL NENE”

AROMADENDRIN PL CRC
 CYANIDIN-3,5-DIGLUCOSIDE PL JSG

CYANIDIN-3,5-DI-O-BETA-D-
GLUCOSYL—P-COUMARATE PL CRC
DIHYDROKAEMPFEROL PL JSG
PHYTOSTEROL PL CRC

COLLINSONIA CANADENSIS L.

“STONE ROOT”

DELTA-CADINENE 13 PL BML
CARYOPHYLLENE 2COLCHICENE TU
HHB
6 PL BML
BETA-ELEMENE 16 PL BML
ELEMICIN 18 PL BML
EO 500 PL BML
GERMACRENE-D 230 PL BML
ALPHA-NAGITANINE 8 PL BML

COLOCASIA ESCULENTA (L.)

SCHOTT

“TARO”

ALANINE 730-2,485 RT USA
ALUMINUM 18 LF B&H
ALUMINUM 3.9 RT B&H
AMYLOSE 68,600-73,360 RT HHB
AMYLOPECTIN 176,400-188,640 RT HHB
ARABINOSE 3,200-8,560 RT HHB MPI
ARGININE 2,200-15,340 LF USA
ARGININE 1,030-3,510 RT USA
ASCORBIC-ACID 69-3,625 LF B&H CRC
USA
ASCORBIC-ACID 0-325 RT B&H CRC
ASH 13,000-155,000 LF B&H CRC
ASH 8,000-63,000 RT B&H CRC
ASPARTIC-ACID 1,920-6,540 RT USA
BORON 3.6 LF B&H
BORON 0.9-7 RT B&H JFS51:523
CALCIUM 260-17,400 LF B&H CRC
CALCIUM 130-3,780 RT B&H CRC
CALCIUM-OXALATE 4,000 LF B&H
CALCIUM-OXALATE 430 RT B&H
CARBOHYDRATES 48,000-640,000 LF
B&H CRC
CARBOHYDRATES 200,000-885,000 RT
B&H CRC
BETA-CAROTENE 18-298 LF CRC
BETA-CAROTENE 0-0.8 RT CRC
CAROTENOIDS 5-7.3 LF B&H
CAROTENOIDS 0.07-0.2 RT B&H
COPPER 1.5 LF B&H
COPPER 1.6-8 RT B&H JFS51:523
CYSTINE 640-4,465 LF USA

CYSTINE 320-1,090 RT USA
FAT 6,000-107,000 LF B&H CRC
FAT 1,000-16,000 RT B&H CRC
FIBER 12,000-150,000 LF B&H CRC
FIBER 6,100-37,000 RT B&H CRC
GALACTOSE 35,200-94,100 RT HHB MPI
GLUTAMIC-ACID 1,740-5,925 RT USA
GLYCINE 740-2,520 RT USA
HEMICELLULOSE RT WOI
HISTIDINE 1,140-7,950 LF USA
HISTIDINE 340-1,160 RT USA
HOMOGENITISIC-ACID RH CCO
IRON 6-200 LF B&H CRC
IRON 4-200 RT B&H CRC JFS51:523
ISOLEUCINE 2,600-18,130 LF USA
ISOLEUCINE 540-1,840 RT USA
KILOCALORIES 310-3,280 LF CRC USA
KILOCALORIES 920-3,820 RT CRC
LEUCINE 3,920-27,335 LF USA
LEUCINE 1,110-3,780 RT USA
LINOLEIC-ACID 2,140-14,925 LF USA
LINOLEIC-ACID 580-1,975 RT USA
LINOLENIC-ACID 930-6,485 LF USA
LINOLENIC-ACID 250-850 RT USA
LYSINE 2,460-17,155 LF USA
LYSINE 670-2,280 RT USA
MAGNESIUM 200-3,140 LF B&H
MAGNESIUM 200-1,350 RT B&H
MANGANESE 45 LF B&H
MANGANESE 1.3-7.6 RT B&H
JFS 51:523
METHIONINE 790-5,510 LF USA
METHIONINE 200-680 RT USA
MUCILAGE 40,000-107,00 RT MPI WOI
MUFA 600-4,185 LF USA
MUFA 160-454 RT USA
NIACIN 8-105 LF B&H CRC USA
NIACIN 4-40 RT B&H CRC
OLEIC-ACID 600-4,185 LF USA
OLEIC-ACID 160-545 RT USA
OXALATE 4,260 LF B&H
OXALATE 650 RT B&H
OXALIC-ACID 1,334 RT? WBB
PALMITIC-ACID 1,310-9,135 LF USA
PALMITIC-ACID 350-1,190 RT USA
PHENYLALANINE 1,950-13,600 LF USA
PHENYLALANINE 820-2,795 RT USA
PHOSPHORUS 490-5,800 LF B&H CRC
PHOSPHORUS 460-5,204 RT B&H CRC
PHYTOSTEROLS 190-650 RT USA
POTASSIUM 4,370-51,774 LF B&H CRC
POTASSIUM 3,230-21,760 RT B&H CRC
USA
PROLINE 600-2,045 RT USA

PROTEIN 24,000-347,280 LF B&H CRC
 USA
 PROTEIN 10,000-112,000 RT B&H CRC
 USA
 PUFA 3,070-21,410 LF USA
 PUFA 830-2,825 RT USA
 RIBOFLAVIN 3-35 LF B&H CRC
 RIBOFLAVIN 0.2-1.6 RT B&H
 SAPONIN RT HHB
 SAPOTOXIN RT HHB
 SERINE 920-3,135 RT USA
 SFA 1,510-10,530 LF USA
 SFA 410-1,400 RT USA
 SODIUM 20-484 LF B&H CRC
 SODIUM 7-480 RT B&H CRC USA
 STARCH 700 LF B&H
 STARCH 245,000-262,000 RT B&H
 STEARIC-ACID 200-V
 STEARIC-ACID 60-205 RT USA
 SUGAR 9,200 LF B&H
 SUGAR 10,000-11,000 RT B&H
 SULFUR 240 LF B&H
 SULFUR 85-565 RT B&H JFS51:523
 THIAMIN 1.3-17 LF B&H CRC
 THIAMIN 0.3-5 RT B&H CRC
 THREONINE 1,670-11,645 LF USA
 THREONINE 690-2,350 RT USA
 TRYPTOPHAN 480-3,345 LF USA
 TRYPTOPHAN 230-785 RT USA
 TYROSINE 1,780-12,415 LF USA
 TYROSINE 550-1,875 RT USA
 URONIC-ACID 800-2,140 RT HHB MPI
 VALINE 2,560-17,850 LF USA
 VALINE 820-2,790 RT USA
 WATER 810,000-900,000 LF B&H CRC
 WATER 660,530-754,000 RT B&H CRC
 ZINC 6.6 LF B&H
 ZINC 5-66 RT B&H JFS51:523

COMMIPHORA SPP

"MYRRH"

ACETIC ACID RE CCO
 ALPHA-AMYRONE RE AYL
 ARABINOSE RE AYL
 ALPHA-BISABOLENE RE CCO
 GAMMA-BISABOLENE RE CCO
 CADINENE RE AYL
 CAMPESTEROL RE AYL
 CHOLESTEROL RE AYL
 CINNAMALDEHYDE RE AYL
 COMMIFERIN RE AYL
 ALPHA-COMMIPHORIC-ACID RE AYL
 BETA-COMMIPHORIC-ACID RE AYL

GAMA-COMMIPHORIC-ACID RE AYL
 COMMIPHORINIC-ACID RE AYL
 M-CRESOL RE AYL
 CUMIC-ALCOHOL RE AYL
 CUMINALDEHYDE RE AYL
 CURZERENONE EO 411/
 DIPENTENE RE AYL
 ELEMOL EO 411/
 EO 15,000-170,000 RE AYL
 3-EPI-ALPHA-AMYRIN
 EUGENOL RE AYL
 FURANODIENE EO 411/
 FURANODIENONE EO 411/
 GALACTOSE RE AYL
 GUM 600,000 RE AYL
 HEERABOLENE RE AYL
 ALPHA-HEERABOMYRRHOL RE AYL
 BETA-HEERABOMYRRHOL RE AYL
 HEERABOSESENE RE AYL
 LIMONENE RE AYL
 LINDESTRENE EO 411/
 2-METHOXY-FURANODIENE EO 411/
 4-O-METHYL-GLUCURONIC-ACID RE
 AYL
 N-NONACOSANE RE HHB
 RESIN 200,000-400,000 RE AYL
 BETA-SITOSTEROL RE AYL
 XYLOSE RE AYL

CONIUM MACULATUM L.

"POISON HEMLOCK"

N-ACETYL-(+)-CONIINE PL JSG
 N-ACETYL-(-)-CONIINE PL JSG
 ARABINO-4-O-METHYLGLUCURO-
 NOXYLAN PL HHB
 ARABINOSE 7,000 PL HHB
 CAFFEIC-ACID PL HHB
 CHLOROGENIC-ACID PL HHB
 GAMMA-CONICEINE PL HHB
 CONHYDRINE PL HHB
 ALPHA-CONHYRDINE PL JSG
 CONIINE 16,500-17,500 PL CRC
 DIOSMIN 30,000-40,000 PL HHB
 EO 10,000 PL HHB
 ETHYL-PIPERIDINE PL CRC
 FALCARINOL-ONE PL HHB
 FALCARINONE PL HHB
 FAT 116,000-179,000 SD CRC
 LIGNIN 320,000 PL HHB
 N-METHYL-(+)-CONIINE PL JSG
 N-METHYL-(-)-CONIINE PL JSG
 PENTOSANS 66,000 PL HHB
 PROTEIN 206,000-249,000 SD CRC

PSEUDOCNHYDRINE PL HHB
 URONIC-ACIDS 33,000 PL HHB
 XYLOSE 46,000 PL HHB

***CONSOLIDA AJACIS* (L.) SCHUR**

“LARKSPUR”

ACETYLDELCOSE PL HHB
 AJACINE SD ALK
 AJACINIDINE PL JSG
 AJACININE SD ALK
 AJACINOIDINE SD ALK
 AJACONINE SD ALK
 AJACUSINE PL JSG
 AJADINE PL JSG
 ANTHRANOYLLYCOCTONINE SD ALK
 CALCATRIPPINE PL HHB
 CONSOLIDINE SD ALK
 DELCOSINE SD AL
 DELPHIN FL HHBK
 DELPHINE FL HHB
 DELSOLINE SD ALK
 DELSONINE SD ALK
 FAT 390,000 SD HHB
 KAEMPFEROL FL HHB
 LYCOCTONINE SD 411/
 MAGNOFLORINE RT ALK
 MANNITOL 3,000 PL HHB
 QUERCETIN FL HHB
 TRIMETHYLACETYLDELCOSE PL
 JSG

***CONVALLARIA MAJALIS* L.**

“LILY-OF-THE-VALLEY”

ACETIDINE-2-CARBONIC-ACID PL HHB
 ASPARAGINE PL HHB
 BIPENDOGENIN PL 411/
 CAFFEIC-ACID PL HHB
 CALCIUM-OXALATE PL HHB
 CANESCIN PL JSG
 CARDENOLIDES 1,000-4,000 FL HHB
 CHEIROTOXIN PL HHB
 CHEIROTOXOL PL HHB
 CHELIDONIC-ACID PL HHB
 CHLOROGENIC-ACID PL HHB
 CHOLINE PL HHB
 CITRIC-ACID PL HHB
 CONVALLAMARIN PL HHB
 CONVALLAMAROGENIN PL JSG
 CONVALLAMAROSIDE PL 411/
 CONVALLARIC-ACID PL HHB
 CONVALLARIN PL HHB

CONVALLATOXIN PL 411/
 CONVALLATOXOL PL 411/
 CONVALLATOXOLOSIDE PL HHB
 CONVALLOSIDE PL 411/
 DESGLUCOCHEIROTOXIN PL 411/
 FERULIC-ACID PL HHB
 GLUCOCONVALLOSIDE PL HHB
 ISORHAMNETIN PL HHB
 ISORHAMNETIN-3-GLUCOSIDE PL JSG
 ISORHAMNETIN-3-
 GALACTODIRHAMNOSIDE PL JSG
 ISORHAMNETIN-3-
 GALACTORHAMNOSIDE PL JSG
 KAEMPFEROL-3-
 GALACTODIRHAMNOSIDE PL JSG
 KAEMPFEROL-3-
 GALACTORHAMNOSIDE PL JSG
 KAEMPFEROL-3-GALACTOSIDE PL JSG
 KAEMPFEROL-GLYCOSIDE PL HHB
 LOKUNJOSIDE PL 411/
 MAJALOSIDE PL HHB
 MALIC-ACID PL HHB
 MYALIN PL JSG
 NEOCONVALLOSIDE PL JSG
 PERIGLUCOSIDE PL HHB
 PERIPALLOSIDE PL JSG
 PERIPLOGENIN PL JSG
 PERIPLORHAMNOSIDE PL HHB
 QUERCETIN-3-
 GALACTODIRHAMNOSIDE PL JSG
 QUERCETIN-3-GALACTORHAMNOSIDE
 PL JSG
 QUERCETIN-3-GALACTOSIDE PL JSG
 RHODEXIN-A PL 411/
 RHODEXOSIDE PL 411/
 RUTIN PL HHB
 SARMENTOGENIN PL 411/
 SARMENTOSIGENIN PL 411/
 SILVER LF HHB
 STROPHALLOSIDE PL JSG
 STROPHANALLOSIDE PL JSG
 STROPHANTHIDIN PL JSG
 STROPHANTHIDOL PL JSG
 TOLOSIDE PL JSG

***CONYZA CANADENSIS* (L.)**

CRONQ.

“HORSEWEED; HOGWEED;
 BUTTERWEED”

APIGENIN PL 411/
 CAFFEIC-ACID PL 411/
 CITRAL(?) PL GEO

CITRONELLAL PL WOI
 DIPENTENE PL 411/
 EO 2,600-6,000 PL GEO 411/
 GALLIC-ACID LF WOI
 D-LIMONENE EO BML
 LINALOOL PL 411/
 MATRICARIA-METHYL-ESTER 520-
 1,200 PL BML
 ALPHA-SPINOSTEROL PL 411/
 BETA-SITOSTEROL PL 411/
 SUCCINIC-ACID PL 411/
 TANNIC-ACID LF WOI
 TANNIN PL 411/
 DL-TERPINEOL 437-673 PL GEO
 TERPINYL-ACETATE 154-238 PL GEO
 VANILLIC-ACID PL 411/

COPAIFERA SPP

"COPAIBA"

ALLOAROMADENDRENE GUM BML
 ALPHA-BERGAMOTENE GUM BML
 TRANS-ALPHA-BERGAMOTENE 22,200-
 91,800 GUM BML
 BETA-BISABOLENE GUM AYL
 BETA-BISABOLOL EO 411/
 DELTA-CADINENE GUM BML
 GAMMA-CADINENE GUM BML
 CALAMENENE GUM BML
 CALAMESENE GUM HHB
 CARIOAZULENE GUM HHB
 CARYOPHYLLENE 151,800-480,600
 GUM AYL
 CARYOPHYLLENE-OXIDE GUM AYL
 COPAENE 45,000-146,700 GUM BML
 ALPHA-COPAENE WD 523/
 BETA-COPAENE WD 523
 COIPAIFERIC-ACID GUM AYL
 COPAIFEROLIC-ACID GUM AYL
 COPALIC-ACID GUM AYL
 ALPHA-CUBEBENE 9,000-32,400 GUM
 BML
 BETA-CUBEBENE 2,100-8,100 GUM
 BML
 AR-CURCUMENE GUM BML
 CYPERENE GUM BML
 BETA-ELEMENE 3,900-14,400 GUM
 BML
 DELTA-ELEMENE 7,200-24,300 GUM
 BML
 GAMMA-ELEMENE GUM BML
 ENANTIO-AGATHIC-ACID GUM AYL
 EO 300,000-900,000 GUM AYL

EPERU-8(20)-EN-15,18-DIOIC-ACID
 GUM AYL
 BETA-FARNESENE GUM BML
 HARDWICKIC-ACID GUM HHB
 HOMOPARACOPAIBIC-ACID GUM HHB
 ALPHA-HUMULENE
 BETA-HUMULENE GUM BML
 GAMMA-HUMULENE GUM AYL
 7-HYDROXYHARDWICKIC-ACID GUM
 HHB
 ILLURINIC-ACID GUM HHB
 (-)-16BETA-KAURAN-19-CARBONIC-
 ACID GUM HHB
 (-)-KAUR-16-EN-19-CARBONIC-ACID
 GUM HHB
 MARACAIBOBALSAM GUM HHB
 BETA-METACOPAIBIC-ACID GUM HHB
 METHYL-11-ACETOXYLABDA-8(20)-13-
 DIEN-15-CARBONIC-ACID-ESTER
 ALPHA-MULTIJUGENOL GUM AYL
 BETA-MUUROLENE WD 523/
 PARACOPAIBIC-ACID GUM HHB
 POLYALTHIC-ACID GUM HHB
 RESIN 60,000-540,000 GUM HHB
 ALPHA-SELINENE GUM BML
 BETA-SELINENE GUM BML

COPTIS CHINENSIS FRANCH.

"CHINESE GOLDTHREAD; HUANG-LIEN; HUANG-LIAN"

ARSENIC 0.11 RH CAL
 BERBERINE 40,000-90,000 RH CCO HHB
 CAERULEIC-ACID RH HHB
 CALCIUM 1,620-3,410 RH CAL SMO
 COLUMBAMINE RH HHB
 COPPER 11-17 RH CAL SMO
 COPTISINE RH CCO
 FERULIC-ACID RH CCO
 IRON 210-320 RH CAL SMO
 JATEORRHIZINE RH CCO
 MAGNESIUM 2,240-2,420 RH CAL SMO
 MAGNOFLORINE RH CCO
 MANGANESE 260-398 RH CAL SMO
 PALMATINE RH CCO
 POTASSIUM 3,550-6,840 RH CAL SMO
 SODIUM 54-296 RH CAL SMO 1/
 WORENINE RH CCO 1/
 ZINC 90-600 RH CAL SMO

1/ The CAL & SMO mineral data may apply
 to *C. teetoides* (= *C. teeta*?) or *C. japonica*

**COPTIS JAPONICA (THUNB.)
MAKINO**

“JAPANESE GOLDTHREAD;
HUANG-LIEN; HUANG-LIAN”

ARSENIC 0.11 RH CAL 1/
BERBERINE 40,000-70,000 RH CCO HHB
CALCIUM 1,620-3,410 RH CAL SMO
COLUMBAMINE RH HHB
COPPER 11-17 RH CAL SMO
COPTISIDE-I RH CCO
COPTISIDE-II RH CCO
COPTISINE RH CCO
FERULIC-ACID RH CCO
IRON 210-320 RH CAL SMO
JATEORRHIZINE RH CCO
MAGNESIUM 2,240-2,420 RH CAL SMO
MAGNOFLORINE RH CCO
MANGANESE 260-398 RH CAL SMO
PALMATINE RH CCO
POTASSIUM 3,550-6,840 RH CAL SMO
SODIUM 54-296 RH CAL SMO 1/
WORENINE RH CCO 1/
ZINC 90-600 RH CAL SMO

1/ The CAL & SMO mineral data may apply
to *C.teetoides* (=C.teeta?) or *C.japonica*

COPTIS SPP

“GENERIC GOLDTHREAD”

ARSENIC 0.11 RH CAL
BERBERASTINE RH 41/
BERBERINE 40,000-90,000 RH CCO HHB
CAERULEIC-ACID RH HHB
CALCIUM 1,620-3,410 RH CAL SMO
COLUMBAMINE RH HHB
COPPER 11-17 RH CAL SMO
COPSINE RH 41/
COPTINE RH HHB
COPTISIDE-I RH CCO
COPTISIDE-II RH CCO
COPTISINE RH CCO
COREXIMINE RH 491/
EPIBERBERINE RH 41/
FERULIC-ACID RH CCO
GREENLANDICINE RH 41/
IRON 210-320 RH CAL SMO
ISOCOPTISINE RH HHB
JATEORRHIZINE RH CCO
LUMICAERULIC-ACID RH 41/
MAGNESIUM 2,240-2,420 RH CAL SMO
MAGNOFLORINE RH CCO

MANGANESE 260-398 RH CAL SMO
OXYBERBERINE RH 41/
PALMATINE RH CCO
POTASSIUM 3,550-6,840 RH CAL SMO
SODIUM 54-296 RH CAL SMO 1/
THALIFENDINE RH 41/
UMBELLATINE RT 491/
WORENINE RH CCO 1/
ZINC 90-600 RH CAL SMO

Aggregated data on the genus *Coptis*

CORCHORUS OLITORIUS L.

“NALTA JUTE”

“JEW’S MALLOW”

“MULUKIYA”

ALANINE 2,560-20,840 LF EFN26:71 USA
ARGININE 1,830-20,185 LF EFN26:71
USA
ASCORBIC-ACID 370-4,080 LF CRC USA
ASH 15,800-151,000 LF CRC USA
ASPARTIC-ACID 5,670-46,150 LF
EFN26:71 USA
BEHENIC-ACID 2,030-2,665 SD HHB
WBB
CALCIUM 2,080-18,365 LF CRC USA
CARBOHYDRATES 58,000-633,000 LF
CRC USA
BETA-CAROTENE 33-495 LF CRC USA
CHLOROGENIC-ACID LF WBB
CORCHORALIC-ACID SD WBB
CORCHOROGENIN PL WBB
CORCHORIN SD WBB
CORCHOROSIDE-A PL WBB
CORCHOROSIDE-B PL WBB
CORCHOROSOL-A SD HHB
COROLOSIDE PL JSG
COROSIN PL JSG
CRYSIMOSIDE SD MPI
CYSTINE 400-3,250 LF EFN26:71 USA
DEGLUCOCOROLOSIDE PL JSG
FAT 2,500-20,350 LF CRC USA
FAT 113,000-148,000 SD WBB
FIBER 12,000-107,000 LF CRC USA
FOLACIN 1.2-10.0 LF USA
FOLIC-ACID 8-32 LF EFN10:249
GLUCOCORCHOROSIDE-A SD HHB
GLUTAMIC-ACID 4,930-40,130 LF
EFN26:71 USA
GLYCINE 2,140-17,420 LF EFN26:71 USA
HCN
HELVETICOSIDE SD HHB
HISTIDINE 690-8,950 LF EFN26:71 USA

IRON 47-485 LF CRC USA
 ISOLEUCINE 2,000-18,000 LF EFN26:71
 USA
 KCALS 280-2960 LF CRC EFN26:71
 LEUCINE 2,470-31,580 LF EFN26:71 USA
 LIGNOCERIC-ACID 1,240-1,630 SD HHB
 WBB
 LINOLEIC-ACID 1,170-9,525 LF USA
 LINOLEIC-ACID 70,625-92,500 SD HHB
 WBB
 LINOLENIC-ACID 20-160 LF USA
 LINOLENIC-ACID 1,015-1,330 SD HHB
 WBB
 LYSINE 1,540-17,825 LF EFN26:71 USA
 MAGNESIUM 640-5,200 LF USA
 METHIONINE 460-5,290 LF EFN26:71
 USA
 MUCILAGE PL WBB
 MUFA 170-1,385 LF USA
 NIACIN 11-102 LF CRC USA
 OLEIC-ACID 140-1,140 LF USA
 OLEIC-ACID 10,280-13,470 SD HHB
 WBB
 OLITORIN SD WBB
 OLITORISIDE PL WBB
 PALMITIC-ACID 300-2,440 LF USA
 PALMITIC-ACID 19,000-25,000 SD HHB
 WBB
 PALMITOLEIC-ACID 30-245 LF USA
 PHENYLALANINE 1,170-17,250 LF
 EFN26:71 USA
 PHOSPHORUS 830-6,755 LF CRC USA
 POTASSIUM 4,440-45,500 LF CRC USA
 PROLINE 1,130-20,052 LF EFN26:71 USA
 PROTEIN 45,000-378,500 LF CRC USA
 PUFA 1,200-9,750 LF USA
 RAFFINOSE SD WBB
 RIBOFLAVIN 2.6-44 LF CRC USA
 SAPONIN PL HHB
 SERINE 1,820-14,815 LF USA
 SFA 380-3,090 LF USA
 SITOSTEROL SD WBB
 SODIUM 80-755 LF CRC USA
 STEARIC-ACID 60-490 LF USA
 STEARIC-ACID 4,180-5,475 SD HHB
 WBB
 STROPHANTHIDIN PL WBB
 THIAMIN 1.3-10.8 LF CRC USA
 THREONINE 890-13,350 LF EFN26:71
 USA
 TRYPTOPHAN 300-4,000 LF EFN26:71
 USA
 TYROSINE 830-11,965 LF EFN26:71 USA
 VALINE 2,480-20,185 LF EFN26:71 USA

VIT-B6 6-50 LF USA
 WATER 804,000-877,200 LF USA

SOME ZMB AMINO-ACID VALUES
 CALCULATED MULTIPLYING
 EFN26:71 APB VALUES BY 4

CORIANDRUM SATIVUM L.

"CORIANDER"

ACETIC-ACID 1 FR BML
 TRANS-ANETHOLE 1-2 FR BML
 ANGELICIN FR AYL
 APIGENIN FR 411/
 ASCORBIC-ACID 780-6,290 LF CRC
 ASH 19,000-153,000 LF CRC
 ASH 6,000-6,600 SD CRC
 BORNEOL 2-54 FR BML
 BORNYL-ACETATE FR CCO
 BORON 9-29 SD BOB
 CAFFEIC-ACID FR LF AYL HHB
 CALCIUM 6,465-14,469 SD CRC USA
 CALCIUM 1,330-13,441 LF CRC
 CAMPHENE 2-155 FR BML
 CAMPHOR 100-1,300 FR BML
 CAPRINALDEHYDE FR CCO
 CARBOHYDRATES 549,900-603,240 FR
 USA
 CARBOHYDRATES 73,000-589,000 LF
 CRC
 BETA-CAROTENE 29-228 LF CRC
 BETA-CAROTENE 0 SD CRC USA
 CARVONE 21-26 FR BML
 CARYOPHYLLENE 1-8 FR BML
 CHLOROGENIC-ACID 305-320 PL ABS
 CHROMIUM 28.8 SD ABS 5/
 1,8-CINEOLE FR BML
 CINNAMIC-ACID 40 PL ABS
 CITRONELLOL 0-8 FR BML
 COBALT 0.9 FR ABS 5/
 COPPER 10-13 FR ABS USA
 COPPER 18 LF USA
 CIS-P-COUMARIC-ACID 273 PL ABS
 CIS-P-COUMARIC-ACID 1,440 FR BAS
 TRANS-P-COUMARIC-ACID 173 PL ABS
 TRANS-P-COUMARIC-ACID 1,120 FR
 ABS
 P-CYMENE 74-728 FR BML
 DECANAL 1,005 LF BML
 DECANAL 6-80 FR BML
 TRANS-2-DECANAL 1-18 FR BML
 5-DECENAL 101 LF BML
 D-DECYLALDEHYDE FR BML
 DIPENTENE FR BML

- 2-DODECANAL FR LF CCO
 DODECANAL 1627 LF BML
 TRANS-2-DODECANAL 9-114 FR BML
 DODECANOL FR BML
 7-DODECENAL 2,131 LF BML
 ELEMOL FR AYL
 EO 10,000 LF BML
 EO 2,000-26,000 FR BML
 ETHYL-LINOLATE 13-166 FR BML
 ETHYL-MYRISTATE 12-153 FR BML
 ETHYL-PALMITATE 46-598 FR BML
 ETHYL-PENTEDECANOATE 0-5 FR BML
 ETHYL-STEARATE 42-546 FR BML
 FAT 110,000-210,000 FR ABS WOI
 FAT 6,000-50,000 LF CRC
 CIS-FERULIC-ACID 467 PL ABS
 CIS-FERULIC-ACID 1,360 FR ABS
 FIBER 16,000-129,000 LF CRC
 FIBER 291,000-319,000 FR CRC
 FRUCTOSE FR HHB
 FURFUROL 60,000 FR HHB
 GERANIAL FR BML
 GERANIOL 34-442 FR BML
 GERANYL-ACETATE 52-988 FR BML
 GLUCOSE FR HHB
 HEPTADECANE FR BML
 HOMOERIODICTYOL FR 411/
 P-HYDROXYBENZOIC-ACID 252-333 PL ABS
 P-HYDROXYBENZOIC-ACID 960 FR ABS
 IRON 30-528 LF CRC USA
 IRON 112-227 FR USA ABS 5/
 ISOQUERCITRIN FR AYL
 LIMONENE 34-1,238 FR BML
 LINALOOL 4,060-16,900 FR BML
 LINALOOL-OXIDE 2-21 FR BML
 LINOLEIC-ACID 13,030-18,260 FR BML USA
 MAGNESIUM 6,940-7,488 LF USA
 MAGNESIUM 2,939-4,016 FR USA
 MANGANESE 18-19 FR ABS USA
 MANGANESE 64 LF USA
 D-MANNITOL FR HHB
 3-O-METHYLKAEMPFEROL FR 411/
 8-METHYNON-5-ENAL 96 LF BML
 MYRCENE 13-169 FR BML
 MYRISTIC-ACID 200-219 FR USA
 MYRISTICIN FR BML
 NEOCNIDILIDE FR 411/
 NEROLIDOL 14-17 FR BML
 NEROL FR BML
 NIACIN 13-136 LF CRC USA
 NIACIN 21-23 FR USA
 NICKEL 2.4 FR ABS 5/
 NONANAL 1-18 FR BML
 OCIMENE FR HHB
 CIS-OCIMENE FR BML
 TRANS-OCIMENE FR BML
 OCTADECANE FR BML
 DELTA-5,6-OCTADECENIC-ACID FR HHB
 OCTANOL 504 LF BML
 3-OCTENAL 97 LF NML
 OLEIC-ACID 39,930-167,819 FR ABS USA WOI
 OXALIC-ACID 50 LF WBB
 PALMITIC-ACID 5,000-16,800 FR USA WOI
 PALMITOLEIC-ACID 1,000-1,097 FR USA
 PECTIN FR HHB
 PENTADECANAL LF BML
 PENTOSANS 100,000 FR HHB
 PETROSELINIC-ACID 40,700-111,300 FR WOI
 ALPHA-PHELLANDRENE FR BML
 BETA-PHELLANDRENE 1-13 FR HHB
 PHOSPHORUS 720-6,452 LF CRC
 PHOSPHORUS 3,907-4,687 FR USA
 ALPHA-PINENE 819-13,780 FR BML HHB
 BETA-PINENE 69-83 FR BML
 POTASSIUM 5,600-48,177 LF CRC
 POTASSIUM 11,866-14,781 FR USA
 PROTEIN 110,000-170,000 FR HHB
 PROTEIN 26,000-236,000 LF CRC
 PROTOCATECHUIC-ACID 167-179 PL ABS
 PROTOCATECHUIC-ACID 760 FR ABS
 PSORALEN FR AYL
 QUERCETIN FR 411/
 QUERCETIN-3-GLUCURONIDE FR AYL
 RHAMNETIN FR 411/
 RIBOFLAVIN 1-21 LF CRC
 RIBOFLAVIN 3-4 FR BML
 RUTIN FT AYL
 SABINENE 1-83 FR BML
 SACCHAROSE FR HHB
 SCPOLETIN FR HHB
 BETA-SITOSTEROL FR HHB
 BETA-SITOSTEROL-D-GLYCOSIDE FR AYL
 DELTA-SITOSTEROL FR AYL
 SODIUM 940-7,581 LF CRC
 SODIUM 308-430 FR USA
 STARCH 100,000 FR HHB
 STEARIC-ACID 1,100-1,207 FR USA

SUGARS 200,000 FR AYL
 TANNIN FR AYL
 TERPINEN-4-OL 6-80 FR BML
 ALPHA-TERPINENE 1-15 FR BML
 GAMMA-TERPINENE 762-2,626 FR BML
 ALPHA-TERPINEOL 36-44 FR BML
 TERPINOLENE 13-26 FR BML
 TETRADECANAL 132 LF BML
 9-TETRADECENAL 924 LF BML
 THIAMIN 1-16 LF CRC USA
 THIAMIN 2-3 FR BML
 ALPHA-THUJENE FR BML
 TOLUENE 117 LF BML
 TRIACONTANE FR AYL
 TRIACONTANOL FR AYL
 TRICOSANOL FR AYL
 TRIDECANAL 168 LF BML
 5,8-TRIDECADIENAL 561 LF BML
 TRANS-TRIDECEN-(2)-AL-(1)
 UMBELLIFERONE FR HHB
 UNDECANAL 304 LF BML
 3,6-UNDECADIENAL 342 LF BML
 6-UNDECENAL 130 LF BML
 UNDECANAL 1-8 FR BML
 VANILLIC-ACID 221-347 PL ABS
 VANILLIC-ACID 960 FR ABS
 WATER 73,000 LF USA
 WATER 86,000-91,200 FR USA
 ZINC 34-52 FR USA ABS 5/

5/ Abs= Pak. J. Sci.Ind. Res. 28: 234.1985

CORIARIA MYRTIFOLIA L.

"MEALY TREE"

CORIAMYRTINE LF HHB
 CORIARIN LF HHB
 ELLAGIC-ACID LF HHB
 EO LF HHB
 GALLIC-ACID LF HHB
 PYROGALLOL PL HHB
 QUERCETIN LF HHB
 RESIN LF HHB
 SUCROSE LF HHB
 TANNIN 100,000-200,000 LF HHB

CORIARIA THYMIFOLIA HUMB. & BONPL.

"GROUNDTOOT"

"SHANSHI"

ACETIC-ACID PL HHB
 ELLAGIC-ACID PL HHB
 FAT 226,000 SD HHB

GALLIC-ACID PL HHB
 QUERCETIN PL HHB
 SUCCINIC-ACID PL HHB
 TUTIN SD HHB

CORNUS FLORIDA L.

"AMERICAN DOGWOOD"

ASH 36,000 SD CRC
 BETULINIC-ACID BK HHB
 CALCIUM 25,900 SD CRC
 CARBOHYDRATES 733,0000 SD CRC
 FAT 24,000-494,000 SD CRC HHB
 FIBER 160,000 SD CRC
 GALLIC-ACID BK CRC
 INOSITOL FL HHB
 KAEMPFEROL FL HHB
 N-NONACOSANE FL HHB
 PHOSPHORUS 1,500 SD CRC
 PROTEIN 23,000-390,000 SD CRC
 HHB
 RESIN BK HHB
 QUERCETIN FL HHB
 SCYLLITOL FL HHB
 TANNIN 30,000 BK HHB
 URSOLIC-ACID PL HHB
 VERBENALIN BK HHB

CORNUS OFFICINALIS

SIEB. & ZUCC.

"CHINESE DOGWOOD"

ARSENIC 0.65 FR CAL
 CALCIUM 3,250 FR CAL
 COPPER 5-6 FR CAL
 CORNIN FR CCO
 CORNUS-TANNIN-1 FR CCO
 CORNUS-TANNIN-2 FR CCO
 CORNUS-TANNIN-3 FR CCO
 GALLIC-ACID FR CCO
 IRON 90 FR CAL
 ISOTERCHEBIN FR CCO
 LOGANIN FR CCO
 MAGNESIUM 830 FR CAL
 MALIC-ACID FR CCO
 MANGANESE 11 FR CAL
 MORRONISIDE FR CCO
 OLEANOLIC-ACID SD CCO
 POTASSIUM 19,500 FR CAL
 SODIUM 138 FR CAL
 SWEROSIDE FR CCO
 TARTARIC-ACID FR CCO
 URSOLIC-ACID FR CCO

URSOLIC-ACID SD CCO
ZINC 12 FR CAL

CORYDALIS SPP**"FUMEWORT"**

ACETYLCORYDAMINE PL JSG
(+)-ACETYLCORYNOLINE PL JSG
(+)-6-ACETYLCORYNOLINE PL JSG
(+)-ACETYLILOCORYNOLINE PL JSG
ADLUMIDINE PL 491/
ALPHA-ALLOCRYPTOPINE PL 491/
AMBININE PL JSG
AUROTENSINE PL 491/
BERBERINE PL 491/
BICUCINE PL 491/
BICUCULLINE PL 491/
BRACTEOLINE PL JSG
BULBOCAPNINE PL 491/
BULLEYANINE PL JSG
BULLEYANOLINE PL JSG
CANADINE PL 491/
CAPAURIDINE PL 491/
CAPAURIMINE PL 491/
CAPAURINE PL 491/
CAPNAUDINE PL 491/
CASEALUTINE PL 491/
CHEILANTHIFOLINE PL 491/
CONSPERMINE PL JSG
COPTISINE PL 491/
CORDRASTINE PL 491/
CORESIMINE PL 491/
CORGOINE PL JSG
CORKUMIDINE PL 491/
CORKUMINE PL 491/
CORPAVERINE PL 491/
CORYBULBINE PL 491/
CORYCAVAMINE PL 491/
CORYCAVIDINE PL 491/
CORYCAVINE PL 491/
CORYDALIDZINE PL JSG
CORYDALINE PL 491/
CORYDINE PL 491/
(+)-CORYNOLINE PL JSG
(+)-CORYNOLOXINE PL JSG
CORYNOXIDINE PL JSG
CORYPALLINE PL 491/
CORYPALMINE PL 491/
CORYTENCHINE PL JSG
CORYTENCHIRINE PL JSG
CORYTUBERINE PL 491/
CRYPTOCVINE PL 491/
CRYPTOPINE PL 491/
CULARINE PL 491/

DEHYDROCORYDALINE PL 491/
DIHYDROSANGUINARINE PL JSG
DOMESTICINE PL JSG
EPICORYNOXIDINE PL JSG
N-FORMYLCORYDAMINE PL JSG
(+)-12-FORMYLOXYCORYNOLINE PL JSG
GORCHACOINE PL JSG
GOVANINE PL JSG
(+)-12-HYDROXYCORYNOLINE PL JSG
(+)-ISOBOLDINE PL JSG
ISOCORYBULBINE PL 491/
ISOCORYDINE PL 491
(+)-ISOCORYNOLINE PL JSG
ISOCORYPALMINE PL 491/
LIENKONINE PL JSG
(+)-NORJUZIPHINE PL JSG
OCHOTENSIMINE PL 491/
OCHOTENSINE PL 491/
OCHROBIRINE PL 491/
6-OXOACETYLCORYNOLINE PL JSG
PALMATINE PL 491/
PROTOPINE PL 491/
SANGUINARINE PL JSG
SCOULERINE PL 491/
STYLOPINE PL 491/
TETRAHYDROCOPTISINE PL 491/
TETRAHYDROPALMATINE PL 491/

CORYLUS AVELLANA L.**"ENGLISH FILBERT"**

ALLANTOIC-ACID LF WOI
ALUMINUM 2.6 SD FUR 1/
ANTIMONY 0.1 SD FUR
ARSENIC 0.02 SD FUR
ASCORBIC-ACID 10-22 CRC USA
ASH 17,000-50,000 SD CRC HHB
AVENASTEROL PL JSG
BARIUM 1.1 SD FUR
BETULIN BK HHB
BORON 15-21 SD AAS BOB FUR
BROMINE 1.8 SD FUR
CADMIUM 0.01-0.05 SD AAS FUR
CALCIUM 1,300-2,591 SD AAS FUR USA
CALCIUM-OXIDE 34,848 LF HHB
CAMPESTEROL PL JSG
CARBOHYDRATES 177,000-229,000 SD CRC WOI
BETA-CAROTENE 0-0.4 SD CRC USA
CELLULOSE WD HHB
CESIUM 0.01 SD FUR
CHLORINE 41 SD FUR
CHROMIUM 0.08-0.7 SD AAS FUR

CITROSTADIENOL PL JSG
 COBALT 0.08-0.3 SD AAS FUR
 COPPER 13-82 SD AAS FUR USA
 EUROPIUM 0.03 SD FUR
 FAT 500,000-650,000 SD CRC HHB
 FIBER 31,000-59,000 SD CRC
 FLUORINE 1.0-1.2 SD AAS FUR
 FOLACIN 0.627-0.855 SD USA
 GALACTAN WD HHB
 GOLD 0.003 SD FUR
 GRAMISTEROL PL JSG
 GUANOSINE PO HHB
 HAFNIUM 0.1 SD FUR
 IODINE 0.03 SD FUR
 IRON 30-99 SD AAS FUR USA
 IRON-OXIDE-(FE₂O₃) 2,376 LF HHB
 KILOCALORIES 5,870-6,682 SD CRC
 USA
 LANTHANUM 0.02 SD FUR
 LEAD 1.7 SD FUR
 LIGNOCERYL-ALCOHOL BK HHB
 LINOLEIC-ACID 14,500-18,850 SD WOI
 LUTETIUM 0.003 SD FUR
 MAGNESIUM 1,500-3,156 SD AAS FUR
 USA
 MANGANESE 16-100 SD AAS FUR USA
 MANNAN WD HHB
 MANNINOTRIOSE SD HHB
 MELIBIOSE SD HHB
 MERCURY <0.004-0.05 SD AAS FUR
 MOLYBDENUM <0.2-0.6 SD FUR
 MYRICITRIN LF HHB
 MYRISTIC-ACID 11,000-14,300 SD HHB
 NIACIN 10-54 SD CRC USA
 NICKEL 1.6-2.0 SD AAS FUR
 NITROGEN 23,000-28,000 SD AAS
 N-NONACOSANE? LF HHB
 OBTUSIFOLIOL PL JSG
 OLEIC-ACID 425,000-572,650 SD HHB
 WOI
 PALMITIC-ACID 15,500-65,000 SD HHB
 WOI
 PANTOTHENIC-ACID 11-12 SD USA
 PHLOBAPHENE BK HHB
 PHOSPHORUS 2,900-4,622 SD AAS CRC
 USA
 PHYTOSTEROLS 5,000 SD HHB
 POTASSIUM 3,500-10,433 SD CRC FUR
 WOI
 PROTEIN 121,000-210,000 SD CRC WOI
 RAFFINOSE SD HHB
 RESINIC-ACID BK HHB
 RIBOFLAVIN 0.6-4.4 SD CRC USA
 RUBIDIUM 4-11 SD AAS FUR

SAMARIUM 0.04 SD FUR
 SCANDIUM 0.004 SD FUR
 SELENIUM 0.01-0.08 SD AAS FUR
 SILICON 100-900 SD AAS FUR
 SILICON-OXIDE (SiO₂) 3,828 LF HHB
 SITOSTEROL BK HHB
 BETA-SITOSTEROL LF HHB
 SODIUM 3.3-32 SD FUR USA
 STACHYOSE SD HHB
 STEARIC-ACID 8,000-10,400 SD WOI
 STIGMASTEROL PL JSG
 STRONTIUM 0.8 SD FUR
 SUCROSE 20,000-50,000 SD HHB
 SULFUR 1,500-2,070 SD AAS FUR
 TANTALUM 0.02 SD FUR
 TARAXEROL LF HHB
 THIAMIN 1.6-6 SD CRC USA
 THORIUM 0.1 SD FUR
 TIN 2.7 SD FUR
 TITANIUM 2.3 SD FUR
 N-TRIACOSANE PO HHB
 3ALPHA,7ALPHA,22ALPHA-
 TRIHYDROXYSTIGMASTEN-(5) LF
 HHB
 TUNGSTEN 0.02 SD FUR
 URANIUM 0.03 SD FUR
 VANADIUM 0.01 SD FUR
 VIT-B6 6 SD USA
 WATER 50,000-74,000 SD AAS CRC
 USA
 XYLAN WD HHB
 YTTERBIUM 0.03 SD FUR
 ZINC 20-39 SD AAS FUR 1/ USA

AAS=ACTA AGRIC SCAND SUPPL
 22:1980 DATA FOR HAZELNUT

CRATAEGUS CUNEATA SIEB. & ZUCC.

"HAWTHORN"

AMYGDALIN FR SD CCO
 ARSENIC 0.11 FR CAL
 CALCIUM 3,770 FR CAL
 CHLOROGENIC-ACID FR CCO
 COPPER 8 FR CAL
 CRATAEGOLIC-ACID FR CCO
 IRON 210 FR CAL
 MAGNESIUM 760 FR CAL
 MANGANESE 12 FR CAL
 MERCURY 0.03 FR CAL
 POTASSIUM 11,900 FR CAL
 QUERCETIN FR CCO
 SODIUM 73 FR CAL

URSOLIC-ACID FR CCO

ZINC 14 FR CAL

CRATAEGUS OXYCANTHA L.**"HAWTHORN"**

ACANTOLIC-ACID LF HHB

ACETYL-CHOLINE LF HHB

ACETYL-VITEXIN-4'-RHAMNOSIDE FR
PED 1/

ADENINE LF HHB

ADENOSINE LF HHB

AESCULIN FR PED

ALUMINUM 29 FR PED

AMINOPURINE FR HHB

AMYGDALIN 1,500 LF HHB

ASCORBIC-ACID 85 FR PED

ASCORBIC-ACID 1,800 LF HHB

ASH 29,000-31,800 FR HHB PED

CAFFEIC-ACID LF HHB

CALCIUM 5,570 FR PED

CARBOHYDRATES 918,000 FR PED

BETA-CAROTENE 5.4 FR PED

CATECHIN FR PED

CATECHIN-TANNINS LF HHB

CHLOROGENIC-ACID LF HHB

CHOLINE LF FR HHB

CHROMIUM 17 FR PED

CITRIC-ACID FR CCO

COBALT 20 FR PED

CRATAEGOLIC-ACID LF HHB

TRANS-CRATAEGOLIC-ACID LF HHB

DIMETHYLAMINE LF HHB

EPICATECHIN LF HHB

L-EPICATECHOL FR CCO

ETHANOLAMINE LF HHB

ETHYLAMINE LF HHB

FAT 39,000 FR PED

FIBER 108,000 FR PED

GLUCOSE FR PED

GUANINE LF HHB

2,,3,3',4,4',5,7-HEPTAHYDROXYFLAVAN-
BIOSIDE PL HHB

HYPEROSIDE FR PED

IRON TR FR PED

ISOAMYLAMINE LF HHB

ISOBUTYLAMINE LF HHB

KILOCALORIES 2,890 FR PED

LAURIC-ACID FR PED

LEUCOANTHOCYANIDIN LF HHB

LINOLEIC-ACID FR PED

LINOLENIC-ACID FR PED

LIPASE SD HHB

MAGNESIUM 940 FR PED

MANGANESE 14 FR PED

O-METHOXY-BETA-PHENETHYLAMINE
FR PED

NEOATEGOLIC-ACID PL JSG

NIACIN TR FR PED

NONACOSAN-10-OL PL HHB

OCTACOSANE FR HHB

OXALIC-ACID FR HHB

PALMITIC-ACID FR PED

PECTIN LF HHB

BETA-PHENETHYLAMINE FR PED

PHLOBAPHENE FR HHB

PHOSPHORUS 1,450 FR PED

POTASSIUM 11,000 FR PED

PROCYANIDIN FR PED

PROTEIN 14,000 FR PED

QUERCETIN-3-RHAMNOGALACTOSIDE
LF HHB

QUERCITRIN LF HHB

RHAMNOSE FR PED

RIBOFLAVIN TR FR PED

RUTIN LF HHB

SELENIUM 20 FR PED

SILICON TR FR PED

BETA-SITOSTEROL 6,500-7,800 FL HHB

BETA-SITOSTEROL 5,100-6,200 LF HHB

SODIUM 55 FR PED

SORBITOL LF HHB

STARCH 150,000-180,000 FR PED

SUGAR 350,000 FR HHB

TARTARIC-ACID FR CCO

THIAMIN TR FR PED

TIN 13 FR PED

TRIMETHYLAMINE LF HHB

TYRAMINE FR PED

URIC-ACID LF HHB

URSOLIC-ACID LF HHB

VITEXIN FR PED

VITEXIN-4'-RHAMNOSIDE FR PED

VITEXIN-4',L-RHAMNO-D-GLUCOSIDE
LF HHB

VITEXIN-4',7-DI-D-GLUCOSIDE LF HHB

WATER 721,000 FR PED

ZINC TR FR PED

CRESCENTIA ALATA L.**"JICARO"**

ASH 38,000-39,000 SD CRC

CALCIUM 500-518 SD CRC

CARBOHYDRATES 229,000-237,000 SD
CRC

BETA-CAROTENE 0.2 SD CRC

FAT 397,000-411,000 SD CRC

FIBER 24,000-25,000 SD CRC
 IRON 94-97 SD CRC
 KILOCALORIES 5,300-5,490 SD CRC
 NIACIN 9 SD CRC
 PHOSPHORUS 9,680-10,020 SD CRC
 PROTEIN 302,000-313,000 SD CRC
 RIBOFLAVIN 1.2 SD CRC
 THIAMIN 7.3-7.6 SD CRC
 WATER 34,000 SD CRC

CROCUS SATIVUS L.

"SAFFRON"

ASH 42,700-133,000 STIGMA WOI
 2-BUTENOIC-ACID-LACTONE STIGMA AYL
 CARBOHYDRATES 436,400-573,000 STIGMA ABS WOI
 BETA-CAROTENE STIGMA WOI
 GAMMA-CAROTENE STIGMA WOI
 CINEOLE STIGMA AYL
 COPPER 3 STIGMA USA
 CROCETIN STIGMA AYL
 ALPHA-CROCETIN STIGMA HHB
 CROCETIN-DI-BETA-GLUCOSIDE PL JSG
 CROCETIN-BETA-D-GENTIOBIOSIDE PL JSG
 CROCETIN-BETA-D-GLUCOSIDE PL JSG
 CROCETIN-BETA-D-GLUCOSIDE-D-GENTIOBIOSIDE PL JSG PL JSG
 CROCIN PL JSG
 CROCIN-1 20,000 STIGMA AYL
 CROCIN-2 STIGMA AYL
 CROCIN-3 STIGMA AYL
 CROCIN-4 STIGMA AYL
 CROCOSE STIGMA WBB
 DELPHINIDIN FL ABS
 CIS-DIMETHYLCROCETIN STIGMA AYL
 TRANS-DIMETHYLCROCETIN STIGMA AYL
 EO 3,700-13,700 STIGMA AYL WOI
 FAT 56,300-134,000 STIGMA AYL WOI
 FIBER 43,800-48,800 STIGMA ABS WOI
 GENTIOBIOSE STIGMA BAS
 HENTRIACONTANE? STIGMA WOI
 ISOPHORONE STIGMA AYL
 KAEMPFEROL FL ABS
 LAURIC-ACID STIGMA HHB
 LYCOPENE STIGMA WOI
 MANGANESE 284 STIGMA USA
 METHYLCROCETIN STIGMA AYL

MYRICETIN FL ABS
 NAPHTHALENE STIGMA AYL
 NITROGEN 22,200-24,300 STIGMA WOI
 OLEIC-ACID STIGMA HHB
 OXYSAFRANAL STIGMA AYL
 PALMITIC-ACID STIGMA HHB
 PETUNIDIN FL ABS
 2-PHENYLETHANOL STIGMA AYL
 PHYTOENE STIGMA ABS
 PHYTOFLUENE STIGMA AYL
 PICROCROCIN 20,000 STIGMA AYL
 PINENE STIGMA AYL
 PROTEIN 125,700-135,800 STIGMA ABS
 PROTOCROCIN STIGMA HHB
 QUERCETIN FL ABS
 RIBOFLAVIN 56-138 HHB 1/
 SAFRANAL STIGMA AYL
 STARCH 119,900-130,300 STIGMA AYL
 STEARIC-ACID STIGMA HHB
 TETRAHYDROLYCOPENE STIGMA ABS
 THIAMIN 0.7-4.0 STIGMA HHB 1/
 3,5,5-TRIMETHYL-4-HYDROXY-1-CYCLOHEXANONE-2-ENE STIGMA AYL
 WATER 85,000-156,000 STIGMA WOI
 XANTHOPHYLL STIGMA WOI
 ZEAXANTHIN STIGMA WOI

1/ assumes gamma/gram=micrograms/g

CROTALARIA JUNCEA L.

"SUNHEMP"

ASH 33,000 SD WOI
 CELLULOSE 800,100 ST WOI
 FAT 43,000 SD HHB
 FIBER 81,000 SD WOI
 DL-BETA-HYDROXY-N-METHYL-NORVALINE PL HHB
 JUNCEIN PL HHB
 PECTIN 64,100 ST WOI
 PROTEIN 346,000 SD WOI
 RIDDELLINE PL HHB
 SENECTIONINE PL HHB
 SENECPHYLLINE PL HHB
 STARCH 411,000 SD HHB
 TRICHODESMIN PL HHB
 WATER 86,000 SD WOI

CROTALARIA RETUSA L.

"RATTLEPOD"

INDICAN LF WOI
 ISATINECINE PL HHB

MONOCROTALINE PL HHB
 MONOCROTALINE-N-OXIDE PL HHB
 NECINE PL HHB
 RETRONECINE PL HHB
 RETUSAMINE PL HHB
 RETUSAMINE-N-OXIDE PL HHB
 RETUSIN PL HHB

CROTON ELUTERIA (L.) SW.

“CASCARILLA”

BETAINE BK CRC
 BORNEOL BK BML
 ALPHA-CALACORENE BK BML
 CALAMENENE BK BML
 CAMPHENE BK BML
 BETA-CARYOPHYLLENE BK CRC
 CASCARILLADIENE PL JSG
 CASCARILLIC-ACID BK CRC
 CASCARILLIDONE BK CRC
 CASCARILLIN-A BK CRC
 CASCARILLONE BK CRC
 CINEOLE BK CRC
 ALPHA-COPAENE BK BML
 CUPARENE BK BML
 CUPAROPHENOL NK 411/
 P-CYMENE BK CRC
 DIPENTENE BK CRC
 BETA-ELEMENE BK BML
 EO 15,000-30,000 BK CRC
 EUGENOL BK CRC
 EUPAROPHENOL BK CRC
 LIGNIN BK CRC
 D-LIMONENE BK CRC
 LINALOOL BK BML
 METHYLTHYMOL BK CRC
 MYRCENE BK BML
 PECTIC-ACID BK CRC
 ALPHA-PINENE BK BML
 BETA-PINENE BK BML
 RESIN 150,000 BK CRC
 TANNIN BK CRC
 TERPINEN-4-OL BK BML
 GAMMA-TERPINENE BK BML
 GAMMA-TERPINEOL BK CRC
 ALPHA-THUJENE BK BML
 VANILLIN BK CRC

CROTON TIGLIUM L.

“PURGING CROTON”

ACETIC-ACID 1,800-3,000 SD WOI
 AMYLASE SD HHB

ARACHIDIC-ACID 4,500-7,500 SD WOI
 ASH 40,000-60,000 SD HHB
 BUTYRIC-ACID SD WOI
 CROTIN SD HHB
 CROTOFOLIN-A PL JSG
 CROTONOSIDE 10,000-38,000 SD HHB
 FAT 300,000-500,000 SD HHB
 FORMIC-ACID 2,400-4,000 SD WOI
 GLYCEROL 21,600-36,000 SD WOI
 INGENOL-3,20-DIBENZOATE PL JSG
 INVERTIN SD HHB
 ISOGUANORIBOSIDE SD HHB
 LAURIC-ACID 150-250 SD CCO WOI
 LINOLEIC-ACID 57,000-95,000 SD WOI
 LIPASE SD HHB
 MYRISTIC-ACID 22,500-37,500 SD WOI
 OLEIC-ACID 111,000-185,000 SD WOI
 PALMITIC-ACID 2,700-4,500 SD WOI
 PHORBOL PL JSG
 PHORBOL-12-O-ACETATE-13-O-
 DODECANOATE SD CCO
 PHORBOL-12-O-BUTYRATE-13-O-
 DODECANOATE SD CCO
 PHORBOL-12-O-DECANOATE-13-O-
 ACETATE SD CCO
 PHORBOL-12-O-DODECANOATE-13-O-
 ACETATE SD CCO
 PHORBOL-12-O-HEXADECANOATE-13-
 O-ACETATE SD CCO
 PHORBOL-12-O-2-METHYLBUTYRATE-
 13-O-DODECANOATE SD CCO
 PHORBOL-12-O-2-METHYLBUTYRATE-
 13-O-DECANOATE SD CCO
 PHORBOL-12-O-2-METHYLBUTYRATE-
 13-O-OCTENOATE SD CCO
 PHORBOL-12-O-TETRADECANOATE-13-
 O-ACETATE SD CCO
 PHORBOL-12-O-TIGLATE-13-O-
 BUTYRATE PL CCO
 PHORBOL-12-TIGLATE-13-DECANOATE
 PL JSG
 PHORBOL-12-O-TIGLATE-13-O-
 DODECANOATE PL JSG
 PHORBOL-12-O-TIGLATE-13-O-
 OCTENOATE PL CCO
 PROTEIN 200,000 SD HHB
 RAFFINASE SD HHB
 RESIN 10,000-34,000 SD WOI
 RICIN SD HHB
 STEARIC-ACID 900-1,500 SD WOI
 TIGLIC-ACID SD HHB
 TRYPSIN SD HHB
 VALERIC-ACID SD WOI
 WATER 60,000 SD HHB

CRYPTOSTEGIA GRANDIFOLIA
R. BR.

“RUBBER VINE”

16-ANHYDROGITOXIGENIN PL CRC
ARACHIDIC-ACID 4,040 SD WOI
CAOUTCHOUC 83,000 LF CRC
CAOUTCHOUC 47,000 SD CRC
CITRIC-ACID LX HHB
CRYPTOGRANDOSIDES LF HHB
16-DESACETYL-
ANHYDROCRYPTOGRANDOSIDE-A
LF HHB
16-DESACETYL-
ANHYDROCRYPTOGRANDOSIDE-B
LF HHB
FAT 108,000 SD WOI
GITOXIGENIN PL CRC
D-GLUCOSE LF HHB
LINOLEIC-ACID 29,820 SD WOI
MALIC-ACID LX HHB
OLEANDRIGENIN LF HHB
OLEANDRIGENIN-3-RHAMNOSIDE LF
JFM
OLEIC-ACID 41,525 SD WOI
PALMITIC-ACID 9,340 SD WOI
16-PROPIONYLGITOXIGENIN PL CRC
RESIN 175,000 SD WOI
D-SARMENTOSE LF HHB
STEARIC-ACID 10,240 SD WOI
URSOLIC-ACID LF HHB
WAX 13,000-15,000 LF WOI

CUCUMIS MELO L.

“CANTALOUPE; MELON”

ACETALDEHYDE PE NAP
ADENOSINE FR NAP
ALUMINUM 26-77 FR USG
ALPHA-AMYRIN SD CCO
BETA-AMYRIN SD CCO
ARACHIDIC-ACID 10,200-55,300 CY
WOI
ARACHIDIC-ACID 2,700-4,014 SD WOI
ARSENIC 0.00435-0.0055 FR USG
ASCORBIC-ACID 397-4,370 FR USA
ASH 6,950-110,000 FR USA USG
AVENASTEROL SD NAP
BARIUM 1.3-7.7 FR USG
BEHENIC-ACID LF NAP
BENZALDEHYDE PE NAP
BENZYL-ACETATE PE NAP
BENZYL-PROPIONATE PE NAP

BORON 1-16.5 FR BOB USG
BUTYL-ACETATE PE NAP
CADMIUM 0.0174-0.044 FR USG
CAFFEIC-ACID PL PAS
CALCIUM 96-3,080 FR USA USG
CAMPESTEROL SD NAP
CAPRIC-ACID 2,400-3,570 SD NAP
CAPROIC-ACID 3,000-5,350 SD WOI
CAPRYLIC-ACID 6,000-8,920 SD WOI
CARBOHYDRATES 83,600-818,026 FR
USA
ALPHA-CAROTENE FR NAP
BETA-CAROTENE 0.2-201 FR USA
EPSILON-CAROTENE FR NAP
CERYL-ALCOHOL SD WOI
CHROMIUM 0.13-0.165 FR USG
CINNAMIC-ACETATE PE NAP
CITRIC-ACID LF HHB
CITRULLINE 142-241 FR NAP
CLEROSTEROL SD NAP
COBALT 0.087-0.11 FR USG
CODISTEROL SD NAP
COPPER 0.4-7.7 FR USA USG
BETA-CRYPTOXANTHIN FR NAP
CUCURBITACIN-B FR NAP
CUCURBITACIN-E FR NAP
CUCURBITIN SD NAP
CYCLOARTENOL SD CCO
25(27)-DEHYDROCHONDRILLASTEROL
SD NAP
25(27)-DEHYDROFUNGISTEROL SD
NAP
25(27)-DEHYDROPORIFERASTEROL SD
NAP
22-DIHYDROBRASSICASTEROL SD
NAP
22-DIHYDROSPINASTEROL SD NAP
3,4-DIMETHOXY-ACETOPHENONE-
ISOMER PE NAP
ETHANOL PE NAP
ETHYL-ACETATE PE NAP
ETHYL-DECANOATE PE NAP
24-BETA-ETHYL-25(27)-
DEHYDROLATHOSTEROL SD NAP
ETHYL-(METHYLTHIO)-ACETATE PE
NAP
ETHYL-2-METHYL-BUTYRATER PE
NAP
EUGENOL-METHYL-ETHER PL PAS
EUPHOL SD CCO
FAT 2,600-29,355 FR USA
FAT 300,000-446,000 SD HHB WOI
FERULIC-ACID PL PAS
FIBER 3,180-39,357 FR USA

- FOLACIN 0.1-1.9 FR USA
 GLOBULIN 26,000 FR HHB
 GAMMA-GLUTAMYL-BETA-PYRAZOL-1-YL-ALANINE FR HHB
 HEPTYL-ACETATE PE NAP
 HEXADECENOIC-ACID 2,190-3,255 SD NAP
 HEXYL-ACETATE PE NAP
 HISTAMINE JU HHB
 P-HYDROXYBENZOIC-ACID PL PAS
 BETA-IONONE PE NAP
 IRON 2-55 FR USA USG
 ISOBUTYL-ACETATE PE NAP
 ISOFRAXIDIN PL PAS
 KILOCALORIES 350-3,425 FR USA
 LAURIC-ACID 360-8,920 SD NAP WOI
 LEAD 1.74-2.2 FR USG
 LINOLEIC-ACID 56,100-726,700 CY NAP
 LINOLEIC-ACID 99,600-246,192 SD HHB NAP WOI
 LINOLENIC-ACID 200,500-219,000 CY NAP
 LITHIUM 0.348-0.44 FR USG
 LUPEOL SD CCO
 MAGNESIUM 92-3,300 FR USA USG
 MALONIC-ACID LF HHB
 MANGANESE 0.4-7.7 FR USA USG
 MARGARIC-ACID ST NAP
 MELONIN SD NAP
 MELOSIDE LF NAP
 MELOSIDE-A-CAFFEYOYL-ESTER LF NAP
 MERCURY 0.00087-0.0011 FR USG
 24-METHYL-25(27)-DEHYDROCYCLOARTANOL SD CCO
 24-METHYLENE-CHOLESTEROL SD NAP
 24-METHYLENOCYCLOARTANOL SD CCO
 24-METHYLENE-24-DIHYDROLANASETOL SD NAP
 24-METHYLENE-24-DIHYDROPARKEOL SD CCO
 24-METHYL-LATHOSTEROL SD NAP
 MOLYBDENUM 0.609-0.77 FR USG
 MULTIFLORENOL SD CCO
 MYRISTIC-ACID 1,500-8,920 FR HHB WOI
 NIACIN 4.6-68 FR USA
 NICKEL 0.87-1.1 FR USG
 NONANAL FR CCO
 NONAN-1-OL FR CCO
 CIS,CIS-3,6-NONADIEN-1-OL FR CCO
 CIS-CIS-NONA-3,6-DIENYL-ACETATE PE NAP
 CIS-6-NONENAL FR CCO
 CIS-3-NONEN-1-OL FR CCO
 CIS-6-NONEN-1-OL FR CCO
 TRANS-2-NONENAL FR CCO
 TRANS-2-NONEN-1-OL FR CCO
 NONYL-ACETATE PE NAP
 OCTYL-ACETATE PE NAP
 OLEIC-ACID 40,500-195,300 CY NAP
 OLEIC-ACID 81,000-200,700 SD HHB WOI
 TRANS,CIS-2,6-NONADIENAL FR CCO
 TRANS,CIS-2,6-NONADIEN-1-OL FR CCO
 PALMITIC-ACID 122,000-532,300 CY NAP
 PALMITIC-ACID 9,600-58,400 SD HHB NAP WOI
 PANTOTHENIC-ACID 1.2-14 FR USA
 PENTADECANOIC-ACID LF NAP
 3-PHENYL-PROPYL-ACETATE PE NAP
 PHOSPHORUS 121-2,640 FR USA USG
 PHYSETOLIC-ACID CY NAP
 PHYTOSTEROLS 100-978 FR USA
 POTASSIUM 3,018-44,000 FR USA USG
 PROPYL-ACETATE PE NAP
 PROTEIN 8,410-89,924 FR USA
 PROTEIN 358,000 SD WOI
 BETA-PYRAZOL-1-YL-ALANINE FR HHB
 RIBOFLAVIN 0.2-2.4 FR USA
 RUTIN PL PAS
 SELENIUM 0.00348-0.0044 FR USG
 SILVER 0.087-0.11 FR USG
 SITOSTEROL SD WOI
 SODIUM 66-1,115 FR USA
 ALPHA-SPINASTEROL ST HHB
 STEARIC-ACID 10,100-61,400 CY NAP
 STEARIC-ACID 10,080-35,145 SD HHB NAP WOI
 STIGMAST-7-EN-3-BETA-OL ST HHB
 STIGMASTEROL SD NAP
 STRONTIUM 2.6-16.5 FR USG
 SUGAR 20,000-30,000 HHB
 SULFUR 139-198 FR USG
 TARAXEROL SD CCO
 THIAMIN 0.3-4.4 FR USA
 TIRUCALLOL SD CCO
 TITANIUM 0.435-2.2 FR USG
 ALPHA-TOCOPHEROL 1.4-14 FR USA
 TRIDECANOIC-ACID RT NAP
 TRIGONELLINE 2..6 SD NAP
 VIT-B6 1-13 FR USA

WATER 896,000-938,000 FR USA USG
 ZINC 1.5-31 FR USA USG
 ZIRCONIUM 1.7-2.2 FR USG

CUCUMIS SATIVUS L.

“CUCUMBER”

ALANINE 180-4,557 FR USA
 ALUMINUM 0.4-21,000 FR AAS USG
 ALPHA-AMYRIN SD NAP
 BETA-AMYRIN FR HHB
 ARGININE 340-8,608 FR USA
 ARSENIC 0.00295-0.25 FR AAS USG
 ASH 3,670-140,000 FR USA USG
 ASPARTIC-ACID 320-8,101 FR USA
 AVENASTEROL SD NAP
 BARIUM 2-70 FR USG
 BORON 1-46 FR AAS BOB USG
 BUTYRIC-ACID 1,200-1,700 SD HHB
 WOI
 CADMIUM 0.001-0.56 FR AAS USG
 CAFFEIC-ACID FR NAP
 CALCIUM 129-10,000 FR AAS USA USG
 CAMPESTEROL SD
 CARBOHYDRATES 29,100-736,709 FR
 USA
 BETA-CAROTENE 0.3-8 FR USA
 CHLOROGENIC-ACID FR NAP
 CHROMIUM 0.002-0.98 FR AAS USG
 CITRULLINE 146 FR NAP
 CLADOCHROMES SP NAP
 COBALT 0.0004-0.14 FR AAS USG
 COPPER 0.3-42 FR AAS USA USG
 CUCURBITACIN-A FR NAP
 CUCURBITACIN-B FR NAP
 CUCURBITACIN-C FR PET
 CUCURBITACIN-D SP NAP
 CUCURBITACIN-E FR NAP
 CUCURBITACIN-I SP NAP
 CUCURBITIN SD NAP
 CYCLOARTENOL SD NAP
 CYCLOEUCALENOL SD NAP
 CYSTINE 30-759 FR USA
 7-DEHYDROAVENASTEROL SD NAP
 25(27)-DEHYDRO-CHONDRILLASTEROL
 SD NAP
 25(27)-DEHYDRO-FUNGISTEROL SD
 NAP
 25(27)-DEHYDRO-PORIFERASTEROL SD
 NAP
 1,3-DIAMINO-PROPANE SD NAP
 22-DIHYDROBRASSICASTEROL SD
 NAP
 22-DIHYDRO-SPINASTEROL LF HHB

24-ETHYL-5ALPHA-CHOLESTA-7,22-
 DIEN-3BETA-OL PL JSG
 24-ETHYLCHOLESTA-5-EN-7BETA-OL
 PL JSG
 24-BETA-ETHYL-25(27)-
 DEHYDROLATHOSTEROL
 SD NAP
 24-EPSILON-ETHYL-25(27)-
 DEHYDROLOPHENOL
 SD NAP
 24-EPSILON-ETHYL-31-NORLANOSTA-
 8,25(27)-DIEN-3-BETA-OL 11 OI(SD)
 NAP
 EUPHOL SD NAP
 FAT 900-43,037 FR USA
 FAT 300,000-425,000 SD HHB WOI
 FERULIC-ACID FR NAP
 FIBER 6,000-151,896 FR USA
 FLUORINE <0.1 FR AAS
 FOLACIN 0.12-4 FR USA
 D-GLUCOSE PE NAP
 GLUTAMIC-ACID 1,540-38,987 FR USA
 GAMMA-GLUTAMYL-BETA-PYRAZOL-
 1-YL-ALANINE SD NAP
 GLYCINE 190-4,810 FR USA
 GRAMISTEROL SD NAP
 HEXANAL FR HHB
 HEXEN-2-AL-1 FR HHB
 HISTIDINE 80-2,025 FR USA
 IRON 2.6-420 FR USA USG
 ISOLEUCINE 170-4,303 FR USA
 ISOMULTIFLORINEOL SD NAP
 ISOORIENTIN LF NAP
 LEAD 0.002-2.8 FR AAS USG
 LEUCINE 230-5,822 FR USA
 LINOLEIC-ACID 35,100-486,700 CY
 NAP
 LINOLEIC-ACID 220-5,570 FR USA
 LINOLEIC-ACID 66,900-170,468 SD HHB
 WOI
 LINOLENIC-ACID 312,200 CY NAP
 ALPHA-LINOLENIC-ACID 290-7,342 FR
 USA
 LITHIUM 0.236-0.56 FR USG
 LUPEOL SD NAP
 LYSINE 220-5,570 FR USA
 LYSOLECITHIN SD NAP
 MAGNESIUM 101-7,000 FR USA USG
 MANGANESE 0.5-98 FR USA USG
 MELOSIDE-A LF NAP
 MERCURY 0.0002-0.05 FR AAS USG
 METHIONINE 40-1,012 FR USA
 24-METHYL-CHOLEST-7-EN-3-BETA-OL
 SD NAP

- 24-METHYL-25(27)-
DEHYDROCYCLOARTANOL SD NAP
24-METHYLENE-CHOLESTEROL SD
NAP
24-METHYLENE-CYCLOARTENOL SD
NAP
24-METHYLENE-24-DIHYDRO-
LANOSTEROL SD NAP
24-METHYLENE-24-DIHYDRO-PARKEOL
SD NAP
24-METHYLENEPOLLINASTEROL PL
JSG
24(R)-14ALPHA-METHYL-24-ETHYL-
5ALPHA-CHOLEST-9(11)-EN-3BETA-OL
PL JSG
24-METHYL-LATHOSTEROL SD NAP
MEVALONIC-ACID 3 FR NAP
MOLYBDENUM <0.1-2.8 FR AAS USG
MUFA 30-759 FR USA
MULTIFLORINEOL SD NAP
MYRISTIC-ACID 10-253 FR USA
NIACIN 3-76 FR USA
NICKEL 0.01-1.25 FR AAS USG
NITROGEN 1,400-80,000 FR AAS
NONADIEN-2,6-AL-1 FR HHB
NONA-TRANS-2-CIS-6-DIEN-1-AL
NONADIEN-2,6-OL-2 FR HHB
NONEN-2-AL-1 FR HHB
NON-TRANS-2-EN-AL FR NAP
OBTUSIFOLIOL SD NAP
OLEIC-ACID 55,200-241,000 CY NAP
OLEIC-ACID 20-506 FR USA
OLEIC-ACID 116,100-180,000 SD HHB
WOI
PALMITIC-ACID 213,200-504,700 CY
NAP
PALMITIC-ACID 270-6,835 FR USA
PALMITIC-ACID 12,420-20,400 SD HHB
WOI
PANTOTHENIC-ACID 2.5-63 FR USA
PENTADEC-CIS-8-EN-1-AL FR NAP
PHOSPHATIDIC-ACID SD NAP
PHOSPHATIDYL-CHOLINE SD NAP
PHOSPHATIDYL-ETHANOLAMINE SD
NAP
PHOSPHATIDYL-GLYCEROL SD NAP
PHOSPHATIDYL-INOSITOL SD NAP
PHOSPHORUS 158-12,600 FR USA USG
PHYTOSTEROLS 14-3,544 FR USA
POTASSIUM 1,465-72,500 FR AAS USA
USG
PROLINE 120-3,038 FR USA
PROPANAL FR HHB
PROTEIN 5,120-142,772 FR USA
PUFA 510-12,911 FR USA
BETA-PYRAZOL-1-YL-ALANINE SD
HHB
RIBOFLAVIN 0.2-5.1 FR USA
RUBIDIUM 0.4-19 FR AAS
SELENIUM 0.0012-2.8 FR USG
SERINE 160-4,051 FR USA
SFA 330-8,354 FR USA
SILICON 10-1,000 FR AAS
SILVER 0.01-0.14 FR USG
BETA-SITOSTEROL FR HHB
SODIUM 16-714 FR USA USG
SPERMIDINE SD NAP
ALPHA-SPINASTEROL LF HHB
SQUALENE FR HHB
STEARIC-ACID 28,800-59,100 CY NAP
STEARIC-ACID 30-759 FR USA
STEARIC-ACID 11,100-69,785 SD HHB
WOI
STELLASTEROL SD NAP
STIGMAST-7-EN-3-BETA-OL LF HHB
7,22-STIGMASTADIEN-3BETA-OL PL
JSG
STIGMAST-7,25-DIEN-3-BETA-OL SD
NAP
7-STIGMASTEN-3BETA-OL PL JSG
STIGMAST-7,22,25-TRIEN-3-BETA-OL
SD NAP
STIGMASTEROL PL PAS
STRONTIUM 4-98 FR USG
SUGAR 10,000 FR HHB
SULFOQUINOVOSYL-DIACYL-GLYC-
EROL PE NAP
SULFUR 140-5,250 FR AAS USG
TARAXEROL SD NAP
THIAMIN 0.3-7.6 FR USA
THREONINE 150-3,797 FR USA
TIRUCALLOL SD NAP
TITANIUM 0.3-18 FR USG
ALPHA-TOCOPHEROL 0.4-38 FR TOT
USA
TRYPTOPHAN 40-1,012 FR USA
TYROSINE 90-2,278 FR USA
VALINE 170-4,304 FR USA
VIT-B6 0.5-13 FR USA
WATER 944,000-971,000 FR USG
ZINC 2-157 FR USA USG
ZIRCONIUM 1.18-2.8 FR USG
(1/ PET=PETIT)
- AAS=ACTA AGRIC SCAND SUPPL
22:1980 H20=96%; ZMB= 25 X APB

CUCURBITA MAXIMA DUCH.**"PUMPKIN"**

ARACHIDIC-ACID 1,100 SD WOI
 ASH 18,200-129,100 LF JAF38:2137
 CALCIUM 364-2,580 LF JAF38:2137
 COPPER 4.2-30 LF JAF38:2137
 FAT 17,500-124,000 LF JAF38:2137
 FAT 366,000 SD WOI
 GLYCOLIPIDS 4,270-35,055 JAF38:2137
 IRON 20.4-145 LF JAF38:2137
 LINOLEIC-ACID 151,7500 SD WOI
 MAGNESIUM 388-2,752 LF JAF38:2137
 OLEIC-ACID 128,065 SD WOI
 PALMITIC-ACID 44,360 SD WOI
 PHOSPHOLIPIDS 5,338-37,860 JAF38:2137
 PROTEIN 45,800-324,800 LF JAF38:2137
 STEARIC-ACID 21,450 SD WOI
 WATER 859,000 LF JAF38:2137
 ZINC 7.6-54 LF JAF38:2137

CUCURBITA PEPO L.**"PUMPKIN"**

(+)-CIS-ABSCISIC-ACID PL JSG
 (+)-TRANS-ABSCISIC-ACID PL JSG
 ADENINE FL CCO
 ADENOSINE FL CCO
 ALANINE 280-3,333 FR USA
 ALANINE 11,580-12,441 SD USA
 ALUMINUM 11 SD PED 1/
 ALPHA-AMINOADIPIC-ACID FL CCO
 ALPHA-AMINO-BUTYRIC-ACID FL CCO
 GAMMA-AMINO-BUTYRIC-ACID SD HHB
 BETA-AMINO-ISOBUTYRIC-ACID FL CCO
 ARACHIDIC-ACID 200 SD HHB
 ARGININE 370-6,429 FR USA EFN26:71
 ARGININE 40,330-43,328 SD USA
 ASCORBIC-ACID 280-5,773 FL USA
 ASCORBIC-ACID 90-1,071 FR USA
 ASH 4,800-98,970 FL USA
 ASH 7,500-95,238 FR HHB USA
 ASH 47,530-70,000 SD PED USA
 ASPARTIC-ACID 1,020-12,143 FR USA
 ASPARTIC-ACID 24,770-26,612 SD USA
 BORON 1 FR BOB
 CAFFEIC-ACID LF HHB
 CALCIUM 390-8,041 FL USA
 CALCIUM 210-2,500 FR USA

CALCIUM 418-474 (-2,960) SD (PED) USA
 M-CARBOXYPHENYLALANINE SD HHB
 CARBOHYDRATES 32,800-676,290 FL USA
 CARBOHYDRATES 65,000-773,809 FR USA
 CARBOHYDRATES 178,100-191,341 (-815,000)SD (PED) USA
 BETA-CAROTENE 12-240 FL USA
 BETA-CAROTENE 9.6-114 FR USA
 BETA-CAROTENE 2-2.5 (-38.4) SD (PED) USA
 CHOLESTEROL
 CHROMIUM 17 SD PED
 DL-CITRULLIN SD HHB
 COBALT 143 SD PED
 COPPER 14-15 SD USA
 CODECARBOXYLASE PL HHB
 CRYPTOXANTHIN FL HHB
 CUCURBIC-ACID PL JSG
 CUCURBIC-ACID-GLUCOSIDE PL JSG
 CUCURBIC-ACID-METHYL-ESTER PL JSG
 CUCURBITAXANTHIN FR HHB
 CUCURBITIN 16,600-66,300 SD VET
 CUCURBITOL SD HHB
 CYSTINE 30-700 FR USA EFN26:71
 CYSTINE 3,010-3,234 SD USA
 DEHYDROASCORBIC-ACID SD HHB
 (+)-DEHYDROVOMIFOLIOL PL JSG
 EDESTINE SD HHB
 24ALPHA-ETHYLLATHOSTEROL PL JSG
 24-ETHYL-5-ALPHA-CHOLESTA-7,25-DIEN-3-BETA-OL SD CCO
 24-ETHYL-5-ALPHA-CHOLESTA-7,22,25-TRIEN-3-BETA-OL SD CCO
 FAT 700-14,430 FL USA
 FAT 1,000-11,905 FR USA
 FAT 384,500-520,000 SD PED USA WOI
 FERULIC-ACID PL JLS58:161
 FIBER 6,300-130,000 FL USA
 FIBER 11,000-130,952 FR USA
 FIBER 19,690-26,538 (-181,000) SD USA (WOI)
 FLAVOXANTHIN JU HHB
 GIBBERELLIN-A39 PL JSG
 GIBBERELLIN-A48 PL JSG
 GIBBERELLIN-A49 PL JSG
 GLUTAMIC-ACID 1,840-35,000 FR USA EFN26:71

- GLUTAMIC-ACID 43,150-46,358 SD USA
 GLUTINOL FL CCO
 GLYCINE 270-8,000 FR USA EFN26:71
 GLYCINE 17,960-19,295 SD USA
 GLYOXALIC-ACID 200 JU HHB
 GUANOSINE SP HHB
 HISTIDINE 140-1,905 FR USA EFN26:71
 HISTIDINE 6,810-7,316 SD USA
 HYDROXYBRENZTRAUBEN-ACID FR HHB
 BETA-HYDROXYBUTYRIC-ACID FR HHB
 DELTA-HYDROXYLYSINE FL CCO
 IRON 7-144 FL USA
 IRON 86-172 SD PED USA
 ISOLEUCINE 310-3,690 FR USA
 ISOLEUCINE 12,640-13,580 SD USA
 ISORHAMNETIN-3-O-RUTINOSIDE-4'-O-RHAMNOSIDE FL CCO
 KAEMPFEROL LF HHB
 ALPHA-KETO-BETA-METHYL-BUTYRIC-ACID 100 JU HHB
 ALPHA-KETO-BETA-METHYL-VALERAINIC-ACID 180 JU HHB
 KILOCALORIES 150-3,092 FL USA
 KILOCALORIES 220-3,095 FR USA EFN26:71
 KILOCALORIES 2,730-5,812 SD PED USA
 LAURIC-ACID 10-205 FL USA
 LAURIC-ACID 10-119 FR USA
 LAURIC-ACID 440-472 SD USA
 LECITHIN 4,000 SD HHB
 LEUCINE 460-5,476 FR USA
 LEUCINE 20,790-22,336 SD USA
 LINOLEIC-ACID 20-410 FL USA
 LINOLEIC-ACID 20-238 FR USA
 LINOLEIC-ACID 209,040-222,411 SD USA
 ALPHA-LINOLENIC-ACID 20-410 FL USA
 ALPHA-LINOLENIC-ACID 30-357 FR USA
 ALPHA-LINOLENIC-ACID 1,810-1,945 SD USA
 LUPEOL FL HHB
 LUTEIN FL HHB
 LYSINE 470-6,429 FR USA EFN26:71
 LYSINE 18,330-19,693 SD USA
 MAGNESIUM 240-4,950 FL USA
 MAGNESIUM 120-1,429 FR USA
 MAGNESIUM 5,140-5,748 SD PED USA
 MANGANESE 40 SD PED
 MANNITOL FR 150,000-200,000 FR HHB
 METHIONINE 110-1,310 FR USA EFN26:71
 METHIONINE 5,510-5,920 SD USA
 MUFA 90-1,855 FL USA
 MUFA 130-1,548 FR USA
 MUFA 142,580-153,180 SD USA
 MYRISTIC-ACID 50-1,030 FL USA
 MYRISTIC-ACID 60-714 FR USA
 MYRISTIC-ACID 200-559 SD HHB USA
 NEOXANTHIN FL HHB
 NIACIN 7-142 FL USA
 NIACIN 6-71 FR USA
 NIACIN 14-22 (-62) SD (PED) USA
 OLEIC-ACID 40-825 FL USA
 OLEIC-ACID 60-714 FR USA
 OLEIC-ACID 141,460-151,977 SD USA
 ORNITHINE FL CCO
 OXALIC-ACID 400 JU HHB
 OXYCEROTINIC-ACID SD HHB
 PALMITIC-ACID 260-5,360 FL USA
 PALMITIC-ACID 370-4,405 FR USA
 PALMITIC-ACID 56,120-60,292 SD USA
 PALMITOLEIC-ACID 50-1,030 FL USA
 PALMITOLEIC-ACID 60-714 FR USA
 PALMITOLEIC-ACID 990-1,064 SD USA
 PHENYLALANINE 300-3,810 FR USA EFN26:71
 PHENYLALANINE 12,220-13,128 SD USA
 PHOSPHOLIPIDS SD HHB
 PHOSPHORUS 490-10,100 FL USA
 PHOSPHORUS 440-5,238 FR USA
 PHOSPHORUS 10,600-12,982 SD PED USA
 PHYTIC-ACID 15,000-22,000 SD HHB
 PHYTOSTEROLS 120-1,428 FR USA
 POTASSIUM 1,730-35,670 FL USA
 POTASSIUM 3,400-40,476 FR USA
 POTASSIUM 5,540-8,670 SD PED USA
 PROLINE 260-17,100 FR USA EFN26:71
 PROLINE 10,000-10,743 SD USA
 PROTEIN 10,000-140,000 FR USA EFN26:71
 PROTEIN 86,000-271,797 SD PED USA
 PUFA 40-825 FL USA
 PUFA 50-595 FR USA
 PUFA 209,040-224,581 SD USA
 QUERCETIN LF HHB
 RHAMNAZIN-3-RUTINOSIDE FL CCO
 RIBOFLAVIN 0.7-15 FL USA
 RIBOFLAVIN 1.1-13.1 FR USA
 RIBOFLAVIN 2.7-4.9 SD PED USA

SALICYLIC-ACID SD WOI
 SELENIUM 32 SD PED
 SERINE 440-6,100 FR USA EFN26:71
 SERINE 11,480-12,333 SD USA
 SFA 360-7,425 FL USA
 SFA 520-6,190 FR USA
 SFA 86,740-93,180 SD USA
 SILICON TR SD PED
 BETA-SITOSTEROL SD HHB
 SODIUM 50-1,030 FL USA
 SODIUM 10-119 FR USA
 SODIUM 180-193 (-990) SD (PED) USA
 ALPHA-SPINASTEROL FL SD CCO
 ALPHA-SPINASTERYL-BETA-D-
 GLUCOSIDE FL CCO
 STEARIC-ACID 20-410 FL USA
 STEARIC-ACID 30-357 FR USA
 STEARIC-ACID 28,110-30,200 SD USA
 5ALPHA-STIGMASTA-7,25-DIEN-3BETA-
 OL PL JSG
 STIGMAST-7-ENOL FL CCO
 STIGMAST-7-ENYL-D-GLUCOSIDE FL
 CCO
 SUCROSE 14,000 SD HHB
 THIAMIN 0.4-8.6 FL USA
 THIAMIN 0.5-5.9 FR USA
 THIAMIN 1.9-3.7 SD PED USA
 THREONINE 250-3,452 FR USA
 EFN26:71
 THREONINE 9,030-9,701 SD USA
 TIN 23 SD PED
 ALPHA-TOCOPHEROL 10-119 FR USA
 TRIGONELLINE SP HHB
 TRYPTOPHAN 120-1,800 FR USA
 EFN26:71
 TRYPTOPHAN 4,310-4,630 SD USA
 TYROSINE 130-5,000 FR USA EFN26:71
 TYROSINE 10,190-10,948 SD USA
 UREASE SD HHB
 VALINE 350-4,167 FR USA
 VALINE 19,720-21,186 SD USA
 VIOLAXANTHIN FL HHB
 (+)-VOMIFOLIOL PL JSG
 XANTHOPHYLL FL HHB
 WATER 916,000 FR USA
 WATER 65,200-73,110 (-823,000) SD
 (PED) USA
 ZEAXANTHIN FL HHB
 ZINC 74-83 SD PED USA

EFN26:71 AMINO-ACID VALUES
 MULTIPLIED BY 10 TO CALCULATE
 ZMB AMINO-ACID VALUES

CUCURBITA SPP

"SUMMER SQUASH"

ALANINE 620-9,810 FR USA
 ARGININE 500-7,910 FR USA
 ASCORBIC-ACID 148-2,340 FR USA
 ASH 5,550-96,045 FR USA
 ASPARTIC-ACID 1,440-22,785 FR USA
 CALCIUM 200-3,165 FR USA
 CARBOHYDRATES 43,500-688,300 FR
 USA
 BETA-CAROTENE 0.12-1.9 FR USA
 COPPER 0.7-12 FR USA
 CYSTINE 120-1,900 FR USA
 FAT 2,100-33,230 FR USA
 FIBER 6,000-94,935 FR USA
 FOLACIN 0.2-4.6 FR USA
 GLUTAMIC-ACID 1,260-19,935 FR USA
 GLYCINE 440-6,962 FR USA
 HISTIDINE 250-3,955 FR USA
 IRON 4-73 FR USA
 ISOLEUCINE 420-6,645 FR USA
 KILOCALORIES 200-3,165 FR USA
 LAURIC-ACID 10-160 FR USA
 LEUCINE 690-10,920 FR USA
 LINOLEIC-ACID 330-5,220 FR USA
 LINOLENIC-ACID 560-8,860 FR USA
 LYSINE 650-10,285 FR USA
 MAGNESIUM 230-3,640 FR USA
 MANGANESE 1-27 FR USA
 METHIONINE 170-2,690 FR USA
 MUFA 160-2,530 FR USA
 MYRISTIC-ACID 10-160 FR USA
 NIACIN 5-85 FR USA
 OLEIC-ACID 140-2,215 FR USA
 PALMITIC-ACID 380-6,015 FR USA
 PALMITOLEIC-ACID 10-169 FR USA
 PANTOTHENIC-ACID 1-18 FR USA
 PECTIN 6,000-94,935 FR USA
 PHENYLALANINE 410-6,485 FR USA
 PHOSPHORUS 350-5,540 FR USA
 POTASSIUM 1,950-30,855 FR USA
 PROLINE 370-5,855 FR USA
 PROTEIN 11,800-186,700 FR USA
 PUFA 890-14,080 FR USA
 RIBOFLAVIN 0.4-6 FR USA
 SERINE 480-7,595 FR USA
 SFA 440-6,960 FR USA
 SODIUM 20-315 FR USA
 STEARIC-ACID 40-635 FR USA
 THIAMIN 0.6-10 FR USA
 THREONINE 280-4,430 FR USA

TRYPTOPHAN 110-1,740 FR USA
 TYROSINE 310-4,905 FR USA
 VALINE 530-8,385 FR USA
 VIT-B6 1-18 FR USA
 WATER 936,800 FR USA
 ZINC 2-41 FR USA

CUMINUM CYMINUM L.

"CUMIN"

ALDEHYDES 12,000-30,000 FR AYL
 ANISALDEHYDE 837 FR BML
 APIGENIN-7-GLUCOSIDE FR AYL
 APIGENIN-7-GLUCURONOSYL-
 GLUCOSIDE FR AYL
 ASCORBIC-ACID 0-76 FR CRC USA
 ASH 58,000-89,000 FR CRC USA
 BENZYL-CINNAMATE 1341 FR BML
 BETA-BISABOLENE 60-360 FR BML
 CIS-GAMMA-BISABOLENE 30 FR BML
 BORNYL-ACETATE 36 FR BML
 BORON 34-50 FR BOB
 CALCIUM 9,310-15,511 FR CRC USA
 CARBOHYDRATES 442,000-570,000 FR
 CRC USA
 DELTA-3-CARENE 270 FR BML
 BETA-CAROTENE 5-8 FR CRC USA
 CARVEOL 435 FR BML
 CARYOPHYLLENE 144-320 FR BML
 CARYOPHYLLENE-OXIDE 435 FR BML
 CHROMIUM 8.4 FR ABS 5/
 1,8-CINEOLE 40-138 FR BML
 COBALT 2.2 FR ABS 5/
 COPAENE 30 FR BML
 COPPER 9-16 FR ABS USA
 CRYPTONE FR AYL
 CUMENE FR BML
 CUMINALDEHYDE 4,000-16,000 FR BML
 CUMINIC-ACID 1 FR BML
 CUMINIC-ALCOHOL FR BML
 CUMINYL-ALCOHOL 300-21,660 FR
 BML
 P-CYMENE 810-12,639 FR BML
 DAUCENE 90 FR BML
 DILLAPIOLE 150 FR BML
 ALPHA-P-DIMETHYLSTYRENE 30 FR
 BML
 DIPENTENE FR BML
 BETA-ELEMENE 30 FR BML
 EO 20,000-50,000 FR AYL BML GEO
 WOI
 EUGENOL FR HHB
 EX SD ANTIOXIDANT AYL
 BETA-FARNESENE 220-440 FR BML

FARNESOL 834 FR BML
 FAT 134,000-270,380 FR CRC USA
 FIBER 105,000-136,000 FR CRC USA
 GUM FR AYL
 IRON 155-748 FR CRC USA ABS 5/
 LIMONENE 60-696 FR BML
 LINALOOL 30-318 FR BML
 LUTEOLIN FR CCO
 LUTEOLIN-7-GLUCOSIDE FR AYL
 LUTEOLIN-7-GLUCURONOSYL-
 GLUCOSIDE FR AYL
 MANGANESE 24-33 FR ABS USA
 P-MENTHA-1,3-DIEN-7-AL 3,330-4,560
 FR BML
 P-MENTHA-1,4-DIEN-7-AL 7,080-7,290
 FR BML
 P-MENTHA-3-EN-7-OL 140-280 FR BML
 METHYL-CINNAMATE 138 FR BML
 METHYL-CHAVICOL 30 FR BML
 MYRCENE 36-120 FR BML
 MYRTENOL FR BML
 NIACIN 46-49 FR CRC USA
 NICKEL 3.6 FR ABS 5/
 DELTA-5,6-OCTADECENOIC-ACID FR
 PERILLALDEHYDE 336 FR BML
 PHELLANDRAL FR BML
 ALPHA-PHELLANDRENE 60 FR BML
 BETA-PHELLANDRENE 90-279 FR BML
 PHOSPHORUS 4,900-5,673 FR CRC USA
 ALPHA-PINENE 9-330 FR BML
 BETA-PINENE 48-6,600 FR BML
 TRANS-PINOCARVEOL 30 FR BML
 PIPERITOL 243 FR BML
 PIPERITONE 172 FR BML
 POTASSIUM 17,880-20,916 FR CRC USA
 PROTEIN 166,000-212,000 FR CRC USA
 RESIN FR AYL
 RIBOFLAVIN 3-4 FR CRC USA
 SABINENE 30-1,014 FR BML
 CIS-SABINENE-HYDRATE 207 FR BML
 TRANS-SABINENE-HYDRATE 87 FR
 BML
 SODIUM 1,680-2,028 FR CRC USA
 TANNIN FR AYL
 ALPHA-TERPINENE 27 FR BML
 BETA-TERPINENE 204 FR BML
 GAMMA-TERPINENE 174-11,800 FR
 BML
 TERPINEN-4-OL 30 FR BML
 ALPHA-TERPINEOL 30-275 FR BML
 TERPINOLENE-EPOXIDE 60 FR BML
 THIAMIN 6-7 FR CRC USA
 ALPHA-THUJENE 24 FR BML
 WATER 81,000 FR CRC USA

XANTHOPHYLL FR HHB
ZINC 41-58 FR USA ABS 5/

5/ Abs= Pak.J.Sci.Ind.Res.28:234.1985

CUNILA ORIGANOIDES (L.)

BRITTON

“MOUNTAIN DITTANY”

CARVACROL 504 SH BML
CARYOPHYLLENE 140 SH BML
1,8-CINEOLE 28 SH BML
P-CYMENE 3,388 SH BML
EO 28,000 SH BML
LIMONENE 140 SH BML
METHYL-CARVACROL 1,092 SH BML
MYRCENE 672 SH BML
3-OCTANOL 56 SH BML
1-OCTEN-3-OL 924 SH BML
ALPHA-PINENE 812 SH BML
BETA-PINENE 28 SH BML
SABINENE 56 SH BML
ALPHA-TERPINENE 644 SH BML
GAMMA-TERPINENE 7,560 SH BML
THYMOL 10,612 SH BML

CURCUMA LONGA L.

“TURMERIC”

ARABINOSE 10,000 RH AYL
ASCORBIC-ACID 0-293 RH CRC
ASH 9,000-148,000 RH CRC
ALPHA-ATLANTONE RH 411/
GAMMA-ATLANTONE RH HHB
AZULENE RH
BISABOLENE RT NAP
BIS-DESMETHOXYCURCUMIN 67-
27,000 RH
BIS-(PARA-HYDROXY-CINNAMOYL)-
METHANE 1,360 RH NAP
2-BORNANOL PL JSG
BORNEOL RH
BORON 1-6 RT BOB
CAFFEIC-ACID 5 RH NAP
CALCIUM 270-2,898 RH CRC
D-CAMPHENE 480 RH
D-CAMPHOR 30-1,500 RH HHB
CAPRYLIC-ACID RH
CARBOHYDRATE 79,000-829,000 RH
CRC
BETA-CAROTENE 0 RH CRC
CARYOPHYLLENE 13,400? EO NAP
CHROMIUM 6 RH ABS 5/

CINEOLE 29,200 EO NAP
1,8-CINEOLE 30-720 RH HHB
CINNAMIC-ACID RH
COBALT 1 RH ABS 5/
COPPER 6-17 RH ABS USA
O-COUMARIC-ACID LF NAP
P-COUMARIC-ACID 345 RH NAP
CUMINYL-ALCOHOL RH
CURCUMENE 121,700 EO NAP
L-ALPHA-CURCUMENE 18,000 RH
L-BETA-CURCUMENE 18,000 RH
CURCUMENOL 21,300 EO NAP
CURCUMIN 9-38,888 RH AYL
CURDIONE 11,900 EO NAP
CURLONE 120 RH NAP
CURZERENONE RH NAP
CURZERENONE-C 20,400 EO NAP
CYCLO-ISOPRENEMYRCENE 8,500-
29,750 RH HHB
P-CYMENE RH HHB
DEHYDROTURMERONE RH HHB
DESMETHOXYCURCUMIN 500-11,100
RH NAP
DICINNAMOYLMETHANE RH HHB
DI-P-COUMAROYL-METHANE RH NAP
DIDESMETHOXYCURCUMIN RH AYL
DIFERULOYL-METHANE RH NAP
DIHYDROCURCUMIN 57 RH NAP
EO 3,000-72,000 RH AYL
EUGENOL 2,100 EO NAP
FAT 18,000-153,000 RH CRC
FERULOYL-P-COUMAROYL-METHANE
RH NAP
FIBER 9,000-84,000 RH CRC
FRUCTOSE 120,000 RH AYL
GLUCOSE 280,000 RH AYL
GUAIACOL RH NAP
4-HYDROXY-CINNAMOYL-
(FERULOYL)-METHANE 180 RH NAP
2-HYDROXY-METHYL-ANTHRAQUI-
NONE RH NAP
IRON 121-467 RH CRC ABS 5/
ISOBORNEOL 200 EO RH NAP
LIMONENE 2,300 EO NAP
LINALOOL 1,600 EO NAP
MANGANESE 33-78 RH ABS USA
P-METHOXYCINNAMIC-ACID 360 RH
MONODESMETHOXYCURCUMIN RH
AYL
NIACIN 5-62 RH CRC
NICKEL 3.8 RH ABS 5/
D-ALPHA-PHELLANDRENE 30-720 RH
HHB
PHOSPHORUS 640-6,307 RH CRC

ALPHA-PINENE 5,300 EO NAP
 BETA-PINENE 2,700 EO NAP
 POTASSIUM 4,870-41,271 RH CRC
 PROTEIN 12,000-306,000 RH AYL CRC
 PROTOCATECHUIC-ACID LF NAP
 RESIN RH AYL
 RIBOFLAVIN 0-12 RH CRC
 D-SABINENE 20-432 RH HHB
 BETA-SESQUIPHELLANDRENE RH AYL
 SODIUM 30-4,290 RH CRC
 SYRINGIC-ACID LF NAP
 TERPINENE 27,200 EO NAP
 TERPINEOL 500 EO NAP
 ALPHA-TERPINEOL RH
 THIAMIN 0-8 RH CRC
 P-TOLYMETHYLCARBINOL 500-1,750
 RH HHB
 TURMERONE 1,800-43,200 RH AYL
 AR-TURMERONE 5,800 RH HHB
 UKONAN-A 33-6,600 RH NAP
 UKONAN-B 47 RH NAP
 UKONAN-C 52 RH NAP
 UKONAN-D RH NAP
 VANILLIC-ACID LF NAP
 WATER 133,000 RH CRC
 ZINC 22 RH ABS 5/
 ZINGIBERENE 750-18,000 RH AYL

5/ Abs.=Pak.J.Sci.Ind.Res.28:234.1985;
 AYL=A. Leung's books; CRC=CRC
 books; HHB=Hager's Handbook;
 NAP=NAPRALERT

CURCUMA XANTHORRHIZA ROXB.

"JAVAN TURMERIC"

ATLANTONE RH HHB
 BORNEOL RH HHB
 CALCIUM-OXALATE RH HHB
 D-CAMPHOR 500-2,950 RH HHB
 BETA-CURCUMENE RH HHB
 AR-CURCUMENE RH HHB
 CURCUMIN 100-10,000 RH HHB
 L-CYCLOISOPRENYMYRCENE 42,500-
 250,750 RH HHB?
 DESMETHOXYCURCUMIN 100-10,000
 EO 50,000-295,000 RH
 ISOFURANOGERMACRENE RH HHB
 MONODESMETHOXYCURCUMIN RH
 HHB
 ALPHA-PHELLANDRENE RH HHB
 STARCH 300,000-400,000 RH HHB

P-TOLYMETHYLCARBINOL 2,500-4,000
 RH HHB
 TURMERONE RH HHB
 XANTHORRHIZOL RH HHB
 ZINGIBERENE RH HHB
 ZINGIBEROL RH HHB

CURCUMA ZEDOARIA (CHRISTM.) ROSCOE

"ZEDOARY; SHOTI"

AMYLOSE TU WOI
 D-BORNEOL 141-300 RH CCO WOI
 D-CAMPHENE 329-700 RH CCO WOI
 D-CAMPHOR 395-840 RH CCO WOI
 1,4-CINEOLE RH CCO
 1,8-CINEOLE 902-1,920 RH
 CURCULONE RH CCO JSG
 CURCUMADIOL RH CCO
 CURCUMANOLIDE-A RH 411/
 CURCUMANOLIDE-B RH 411/
 CURCUMENOL RH CCO
 CURCUMENONE RH 411/
 CURCUMIN 0-1,000 RH
 CURCUMOL RH CCO
 CURDIONE RH CCO
 CURZERENONE RH CCO
 DEHYDROCURDIONE RH CCO
 DESMETHOXYCURCUMIN 0-1,000 RH
 BIS-DESMETHOXYCURCUMIN 0-1,000
 RH
 DIFERULOYLMETHANE RT CCO
 P,P'-DIHYDROXYDICINNAMYL-
 METHANE RH HHB
 DI-P-COUMAROYLMETHANE RT CCO
 ENT-CURZERENONE PL JSG
 EO 10,000-15,000 RH CCO
 EPICURZERENONE RH CCO
 ETHYL-P-METHOXYCINNAMATE RH
 CCO
 FERULOYL-P-COUMAROYLMETHANE
 RT CCO
 FURANODIENE RH CCO
 FURANODIENONE RH CCO
 GERMACRONE-4,5-EPOXIDE RH 411/
 P-HYDROXYCINNAOYL-FERULOYL-
 METHANE RH HHB
 ISOCURCUMENOL RH HHB
 ISOCURZERENONE RH CCO
 ISOFURANODIENONE RH CCO
 ISOFURANOGERMACRENE RH CCO
 MUCILAGE RH HHB
 ALPHA-PINENE RH CCO

D-ALPHA-PINENE 141-300 RH WOI
 PROCURCUMENOL RH CCO
 PYROCURCUMENONE RH HHB
 PYROCURZERENONE RH CCO
 RESIN RH CCO
 SESQUITERPENES 1,000-2,000 RH WOI
 SESQUITERPENE-ALCOHOLS 4,800-
 9,600 RH WOI
 STARCH 500,000 RH CCO HHB
 ZEDERONE RH CCO
 ZEDOARONE PL JSG

CYCAS REVOLUTA THUNB.

"SAGO CYCAS"

BEHENIC-ACID
 BETA-CAROTENE FR CRC
 CRYPTOXANTHIN FR CRC
 CYCASIN 2,000-3,000 SD CRC
 FAT 39,000 FR CRC
 FAT 1,200-4,300 SD HHB
 FORMALDEHYDE 1,640-2,200 SD WOI
 GALACTOSE ST CRC
 GLUCOSE ST CRC
 MACROZAMIN SD CRC
 MUCILAGE ST CRC
 NEOCYCASIN-A SD CRC
 NEOCYCASIN-B SD CRC
 PROTEIN 11,500-140,000 SD HHB WOI
 SOTETSUFLAVONE SD HHB
 STARCH 68,000-243,700 SD HHB
 SUGAR 30,000 FR CRC
 SUGAR 39,000-140,000 SD HHB
 WATER 618,000 FR CRC
 WATER 721,000 SD HHB
 XYLOSE ST CRC
 ZEAXANTHIN FR CRC

CYCLANTHERA PEDATA (L.)

SCHRADER

"ACHOCHA"

ASCORBIC-ACID 140-2,800 FR CRCPAN
 ASH 7,000-122,800 FR PAN
 CALCIUM 130-3,160 FR CRC PAN
 CARBOHYDRATES 40,000-719,300 FR
 CRCPAN
 BETA-CAROTENE 0.3-82 FR PAN
 FAT 1,000-35,100 FR CRC PAN
 FIBER 7,000-140,350 FR CRC PAN
 IRON 6-210 FR CRC PAN
 KILOCALORIES 170-3,160 FR CRC PAN
 NIACIN 3-75 FR CRC PAN

PHOSPHORUS 260-5,615 FR CRC
 PAN
 PROTEIN 6,000-122,800 FR CRCPAN
 RIBOFLAVIN 0.3-5 FR PAN
 THIAMIN 0.4-8 FR PAN
 WATER 881,000-945,000 FR CRC PAN

CYDONIA OBLONGA MILLER

"QUINCE"

ALDOBIONIC-ACID SD WOI
 AMYGDALIN 4,000 SD HHB WOI
 L-ARABINOSE SD WOI
 ASCORBIC-ACID 100-960 FR WOI
 ASH 3,000- FR CRC
 ASH 13,000 SD WOI
 BORON 85-160 FR BOB
 CALCIUM 60-805 FR CRC
 CARBOHYDRATES 119,000-951,000 FR
 WOI
 BETA-CAROTENE 0-16 FR CRC
 CELLULOSE SD HHB
 CHLOROGENIC-ACID FR CRC(FNS)
 P-COUMARIC-ACID FR CRC(FNS)
 EMULSIN SD HHB
 FAT 1,000-17,000 FR WOI
 FAT 140,000-192,000 SD WOI
 FERULIC-ACID FR CRC(FNS)
 FIBER 17,000-178,000 FR WOI
 FRUCTOSE FR HHB
 GALACTOSE SD HHB
 GLUCOSE FR HHB
 IRON 6-52 FR CRC
 ISOCHLOROGENIC-ACID FR CRC
 (FNS)
 LEUCOANTHOCYANIDINE FR HHB
 LINOLEIC-ACID 39.2% SD WOI
 LINOLENIC-ACID 3.9% SD WOI
 MALIC-ACID SD WOI
 MARMELOLACTONE-A PL JSG
 MARMELOLACTONE-B PL JSG
 MUCILAGE 200,000-220,000 SD WOI
 MYRISTIC-ACID SD HHB
 NEOCHLOROGENIC-ACID FR CRC
 (FNS)
 NIACIN 2-22 FR CRC
 OLEIC-ACID 42.5% SD WOI
 PECTIN FR HHB HEMOSTATIC
 PHOSPHORUS 150-1,049 FR CRC
 POTASSIUM 1,970-12,160 FR CRC
 PROTOPECTIN FR HHB
 PROTEIN 3,000- FR WOI
 RIBOFLAVIN 0.3-1.9 FR CRC

ROSEOSIDE PL JSG
 SACCHAROSE FR HHB
 SODIUM 247 FR CRC
 SUGARS 96,000 FR HHB
 TANNIN SD 411/
 TARTARIC-ACID SD WOI
 THIAMIN 0.2-1.9 FR CRC
 WATER 824,000-857,000 FR CRC

CYMBOPOGON CITRATUS (DC.
 EX NEES) STAPP

“WEST INDIAN LEMONGRASS”

ACETONE PL GEO
 ALUMINUM 515 PL PED
 ASH 43,000 PL PED
 CALCIUM 3,680 PL PED
 ALPHA-CAMPHORENE PL GEO
 CAPRYLIC-ACID PL AYL
 CARYOPHYLLENE PL BML
 CERYL-ALCOHOL PL CCO
 CHROMIUM 37 PL PED
 1,8-CINEOLE PL BML
 CITRAL 1,080-3,480 PL WOI
 CITRONELLAL PL GEO
 CITRONELLIC-ACID PL AYL
 COBALT 48 PL PED
 CYMBOPOGONE PL CCO
 CYMBOPOGONOL PL JSG
 CITRONELLOL PL WOI
 CYMBOPOGONOL (200 LF WAX)
 CCO
 DECANAL PL AYL
 N-DECYLALDEHYDE
 DIACETYL PL GEO
 ALPHA-BETA-
 DIHYDROPSEUDOIONONE
 DIPENTENE PL GEO
 EO 2,000-4,000 PL WOI
 FARNESAL PL GEO
 FARNESOL PL GEO
 FAT 71,000 PL PED
 FURFURAL PL GEO
 GERANIC-ACID PL AYL
 GERANIOL 10-36 PL WOI
 GERANYL-ACETATE PL BML
 HEXACOSANOL PL AYL
 IRON 543 PL PED
 ISOPULEGOL PL GEO
 ISOVALERALDEHYDE PL GEO
 ISOVALERIC-ACID PL AYL
 KILOCALORIES 3,890 PL PED
 LIMONENE PL GEO

L-LINALOOL PL GEO
 LINALYL-ACETATE PL BML
 LUTEOLIN LF RIZ
 LUTEOLIN-C-GLYCOSIDE LF RIZ
 MAGNESIUM 3,310 PL PED
 MANGANESE 104 PL PED
 METHYL-HEPTENOL PL GEO
 METHYL-HEPTENONE 4-12 PL FEO
 MYRCENE 240-800 PL GEO WOI
 NERAL LF BML
 NEROL PL GEO
 PHOSPHORUS 2,140 PL PED
 ALPHA-PINENE PL BML
 POTASSIUM 23,000 PL PED
 PROTEIN 82,000 PL PED
 QUERCETIN PL RIZK
 RUTIN LF RIZK
 SAPONIN PL AYL
 SELENIUM 62 PL PED
 SILICON 132 PL PED
 BETA-SITOSTEROL PL AYL
 SODIUM 640 PL PED
 ALPHA-TERPINEOL PL GEO
 TIN 7.1 PL PED
 TRIACONTANOL PL AYL
 WATER 798,000 PL PED
 ZINC TR PL PED

CYMBOPOGON FLEXUOSUS
 (NEES EX STEUDEL)

J. F. WATSON

“EAST INDIAN LEMONGRASS”

ARUNDIN PL JSG
 BORNEOL 750-1,500 LF HHB
 CITRAL 250-4,250 LF AYL
 CITRONELLAL LF AYL
 N-DECANAL LF AYL
 N-DECYLALDEHYDE LF HHB
 DIPENTENE LF AYL
 EO 2,500-5,000 LF AYL
 FARNESOL LF AYL
 GERANIOL 875-2,500 PL AYL
 GUANIC-ACID LF AYL
 HEPTENOL LF AYL
 LIMONENE
 METHYLEUGENOL 500-1,000 PL
 AYL
 METHYLHEPTENOL PL AYL
 MYRCENE PL AYL
 BETA-SITOSTEROL PL JSG
 TRIACONTANE PL JSG
 TRIACONTANOL PL JSG

CYMBOPOGON MARTINII

(ROXB.) J. F. WATSON

"ROSHA GRASS; PALMAROSA"

ACETIC-ACID PL HHB
 CAPRIC-ACID PL HHB
 TRANS-CARVEOL PL HHB
 CARVONE PL HHB
 CIS-DIHYDROCARVONE PL HHB
 TRANS-DIHYDROCARVONE PL HHB
 DIPENTENE 10-50 PL HHB
 EO 1,000-5,000 PL HHB
 EO 4,500-13,700 FL HHB
 FARNESOL PL HHB
 GERANIOL 750-4,750 PL HHB
 GERANYL-ACETATE PL HHB
 GERANYL-CAPRONATE PL HHB
 LIMONENE PL HHB
 LIMONENE-OXIDE PL HHB
 P-MENTHA-1(7),8-DIEN-2-OL PL HHB
 P-MENTHA-1,8-DIEN-3-OL PL HHB
 P-MENTHA-2,8-DIEN-1-OL PL HHB
 METHYLHEPTENONE PL HHB
 PERILLYLALCOHOL 450-2,250 PL HHB
 PIPERITONE

CYMBOPOGON NARDUS (L.)

RENDLE

"CEYLON CITRONELLA;
 CITRONELLA"

L-BORNEOL 198-792 PL BML HHB
 BOURBONENE 30-120 PL BML
 CAMPHENE 150-960 PL BML HHB
 CAMPHOR 15-60 PL BML
 DELTA-3-CARENE
 CARYOPHYLLENE 96-384 PL BML
 1-CARVOTANACETONE 327-1,284 PL
 HHB
 D-CITRONELLAL 126-1,800 PL HHB
 CITRONELLOL 252-1,008 PL BML
 D-CITRONELLOL-ACETATE 57-228 PL
 BML
 D-CITRONELLOL-N-BUTYRATE PL
 HHB
 CITRONELLYL-BUTYRATE PL BML
 P-CYMENTHENE PL BML
 ELEMOL 51-204 PL BML
 EO 3,000-12,000 PL HHB
 ETHANOL 75-300 PL HHB
 FARNESOL 6-36 PL HHB
 FURFUROL 69-276 PL HHB

GERANIOL 600-4,794 PL HHB
 GERANYL-ACETATE 188-750 PL HHB
 GERANYL-BUTYRATE 45-180 PL BML
 GERANYL-FORMATE 126-504 PL BML
 HEXANOL 3-12 PL BML
 L-LIMONENE 291-1,164 PL HHB
 LINALOOL 36-144 PL BML
 LINALYL-ACETATE 24-96 PL BML
 MENTHOL PL BML
 METHYL-EUGENOL 51-204 PL HHB
 METHYL-HEPTENONE 6-24 PL BML
 METHYL-ISOEUGENOL 216-864 PL BML
 MYRCENE 9-36 PL BML
 NEROL PL HHB
 NEROLIDOL 9-36 PL BML
 CIS-OCIMENE 42-168 PL BML
 TRANS-OCIMENE 54-216 PL BML
 PERILLALDEHYDE 363-1,452 PL HHB
 PHELLANDRAL 253-1,012 PL HHB
 ALPHA-PHELLANDRENE 24-96 PL BML
 ALPHA-PINENE 78-312 PL BML
 BETA-PINENE PL BML
 SABINENE PL BML
 TERPINEN-4-OL 21-84 PL BML
 ALPHA-TERPINEOL PL BML
 TERPINOLENE 21-84 PL BML
 THUYL-ALCOHOL PL HHB
 TRICYCLENONE 45-180 PL BML

CYMBOPOGON PARKERI STAPF

"SKHABAR"

BORNYL-ACETATE PL RIZ
 BUTYLACETATE PL RIZ
 CAMPESTEROL PL RIZ
 CAR-3-ENE PL RIZ
 CHOLESTEROL PL RIZ
 P-COUMARYL-ALCOHOL PL RIZ
 CRYPTOMERIDIOL PL RIZ
 P-CYMENTHENE PL RIZ
 DECANE 42 PL RIZ
 DIETHYLBENZENE PL RIZ
 2,5-DIMETHYLHEXAN-3,4-DIONE PL
 RIZ
 DODECANE PL RIZ
 EO 15,500 PL RIZ
 EUDESMOL 254-1,004
 FARNESAL
 FARNESOL 315-1,249
 GERANIAL 17-1,290
 GERANIOL 2,968-7,474
 GERANYL-ACETATE 214-1,589
 GERANYL-BUTANOATE

GERANYL-HEPTANOATE 15-107
 GERANYL-HEXANOATE 23-226
 GERANYL-OCTANOATE 26-172
 GERANYL-VALERATE
 BETA-GURJUNENE 141
 GUAJOL 99
 4-HYDROXY-4-METHYL-PENTANONE
 LIMONENE 20-634
 LINALOOL 39-499
 9-METHYL-4-DECANOL
 METHYL-ETHYL-BENZENE
 6-METHYL-5-HEPTEN-2-ONE
 7,4-METHYL-OCTANONE
 14-METHYL-4-PENTADECANONE
 12-METHYL-4-TRIDECANONE 259
 12-METHYL-TRIDECANONE 20-474
 10-METHYL-7-UNDECANONE
 NERAL 42-583
 NEROL 2,059-6,189
 NERYL-ACETATE 333-1,846
 NERYL-BUTANOATE 107
 NERYL-HEXANOATE 143
 NERYL-OCTANOATE 14-218
 NONANE
 QUERCETIN-3,4'-DIMETHYLETHER
 BETA-SITOSTEROL
 STIGMASTEROL
 ALPHA-TERPINEOL 70
 ALPHA-TERPINOLENE
 TOLUENE
 UMBELLIFERONE
 UNDECANE
 XYLENE 56

Almost everything here from Rizk's
 Phytochemistry of the Flora of Qatar

CYMBOPOGON WINTERIANUS JOWITT

"JAVA CITRONELLA;
 MAHAPENGIRI"

BENZALDEHYDE PL GEO
 BISABOLENE PL BML
 BOURBONENE PL GEO
 GAMMA-CADINENE 40-158 PL BML
 GEO 1/
 CADINOL PL GEO
 GAMMA-CADINOL 60-105 PL GEO
 CALAMENENE PL BML
 CARYOPHYLLENE 84-147 PL BML
 ALPHA-CELANENE PL GEO
 CITRAL 8-14 PL GEO

CITRONELLAL 1,000-2,289 PL AYL BML
 GEO
 CITRONELLOL 440-770 PL AYL BML
 CITRONELLYL-ACETATE 80-280 PL
 BML
 CITRONELLYL-BUTYRATE PL BML
 CITRONELLYL-CITRONELLATE 66-233
 PL GEO 1/
 CUBEENE PL BML
 CYMBOPOL 60-105 PL GEO
 DIACETYL PL GEO
 DICITRONELLOXIDE PL GEO
 DIPENTENE PL GEO
 BETA-ELEMENE 40-70 PL BML
 ELEMOL 40-420 PL BML GEO
 EO 4,000-7,000 PL GEO
 EUGENOL 66-233 PL GEO 1/
 FARNESOL 24-42 PL BML
 FURFURAL PL GEO
 GERANIOL 1,064-3,150 PL AYL GEO
 GERANYL-ACETATE 120-556 PL BML 1/
 GERANYL-BUTYRATE 66-233 PL
 GEO 1/
 GERANYL-FORMATE 100-175 PL BML
 N-1-HEXANOL PL GEO
 2-HEXEN-1-AL PL GEO
 2-HEXEN-1-OL PL GEO
 HYDROXYCITRONELIC-ACID
 PL JSG
 ISOAMYL-ALCOHOL PL AYL
 ISOBUTYL-ALCOHOL PL GEO
 ISOPULEGOL PL HHB
 ISOVALERALDEHYDE PL GEO
 L-LIMONENE 80-350 PL BML GEO
 LINALOOL 40-105 PL HHB
 LINALYL-ACETATE 80-140 PL BML
 D-1-METHYL-3-CYCLOHEXANONE PL
 GEO
 METHYL-EUGENOL 20-60 PL GEO
 METHYL-HEPTENONE PL GEO
 METHYL-ISOEUGENOL 92-161 PL
 BML
 L-3-METHYL-1-PENTANAL (?) PL GEO
 L-3-METHYL-1-PENTANOL (?) PL GEO
 MYRCENE PL BML
 NERAL PL BML
 NEROL 308-539 PL BML
 ALPHA-PINENE PL BML
 SESQUICITRONELLENE PL GEO
 VANILLIN PL GEO

1/Where source spread a quantity over two or
 three compounds, each was assigned one-
 half or one-third.

CYNANCHUM ATRATUM BUNGE

“BAI-WEI; PAI-WEI”

ARSENIC 4.85 RT CAL
 CALCIUM 9,900 RT CAL
 COPPER 12 RT CAL
 CYNANCHOL RT CCO
 IRON 1,350 RT CAL
 MAGNESIUM 2,210 RT CAL
 MANGANESE 341 RT CAL
 MERCURY 0.06 RT CAL
 POTASSIUM 13,200 RT CAL
 SODIUM 940 RT CAL
 ZINC 31 RT CAL

CYNARA SCOLYMUS L.

“ARTICHOKE”

ASCORBIC-ACID 0-828 FL CRC
 ASH 10,600-106,000 FL CRC USA
 BORON 2-5 FL BOB
 CAFFEIC-ACID FL FT:1986
 1-CAFFELOYLQUINIC-ACID FL HHB
 3-CAFFELOYLQUINIC-ACID FL HHB
 4-CAFFELOYLQUINIC-ACID FL HHB
 5-CAFFELOYLQUINIC-ACID FL HHB
 CAFFELOYL-4-QUINIC-ACID FL HHB
 CALCIUM 120-5,286 FL CRC
 CARBOHYDRATES 105,000-755,000 FL
 CRC USA WOI
 BETA-CAROTENE 1-20 FL CRC
 CARYOPHYLLENE EO AYL
 CHLOROGENIC-ACID FL AYL
 COPPER 2-24 FL USA
 CYANIDOL-3-CAFFEYLGLUCOSIDE PL
 JSG
 CYANIDOL-3-CAFFEYLSOPHOROSIDE
 PL JSG
 CYANIDOL-DICAFFEYLSOPHOROSIDE
 PL JSG
 CYANIDOL-GLUCOSIDE PL JSG
 CYANIDOL-5-GLUCOSIDE-3-
 CAFFEYLSOPHOROSIDE PL JSG
 CYANIDOL-SOPHOROSIDE PL JSG
 CYNARIN 200-300 LF HHB
 CYNARAGENIN LF HHB
 CYNARAPICRIN LF HHB
 CYNARATRIOL FL ABS
 CYNAROLIDE PL JSG
 DECANAL EO AYL
 1,3-DI-O-CAFFELOYLQUINIC-ACID FL
 AYL
 1,4-DICAFFELOYLQUINIC-ACID FL HHB

1,5-DI-O-CAFFELOYLQUINIC-ACID FL
 AYL
 O-DIPHENOLICS 20,000 FL AYL
 EUGENOL EO AYL
 FAT 1,000-20,000 FL CRC
 FERULIC-ACID ABS FT:1986
 FIBER 11,400-224,000 FL CRC USA
 FLAVONIDS 1,000-10,000 FL AYL
 FOLACIN 0.7-4.7 FL USA
 GLYCERIC-ACID FL ABS FT:1986
 GLYCOLIC-ACID FL ABS FT:1986
 HETEROSIDE-B FL ABS FT:1986
 HEX-1-EN-3-ONE FL AYL
 INULIN FL WOI
 IRON 11-101 FL CRC WOI
 ISOAMERBOIN PL JSG
 KILOCALORIES 470-3,120 FL USA
 LAURIC-ACID 20-135 FL USA
 LINOLEIC-ACID 460-3,055 FL USA
 LINOLENIC-ACID 170-1,130 FL USA
 LUTEOLIN-4-BETA-D-GLUCOSIDE FL
 AYL
 LUTEOLIN-7-BETA-D-GLUCOSIDE FL
 AYL
 LUTEOLIN-7-BETA-RUTINOSIDE FL
 AYL
 LUTEOLIN-7-RUTINOSIDE-4'-GLU-
 COSIDE
 MAGNESIUM 555-4,275 FL USA
 MANGANESE 2-17 FL USA
 MUCILAGE
 MUFA 50-330 FL USA
 MYRISTIC-ACID 20-135 FL USA
 NEOCHLOROGENIC-ACID
 NIACIN 10-82 FL CRC USA
 NON-TRANS-2-ENAL FL AYL
 OCT-1-EN-3-ONE FL AYL
 OLEIC-ACID 50-330 FL USA
 PALMITIC-ACID 290-1,925 FL USA
 PANTOTHENIC-ACID 3-23 FL USA
 PHENYLACETALDEHYDE FL AYL
 PHOSPHORUS 860-6,240 FL CRC USA
 POTASSIUM 3,500-29,780 FL CRC USA
 PROTEIN 31,000-276,000 FL CRC USA
 PSEUDOTARAXASTEROL LF HHB
 PUFA 630-4,185 FL USA
 RIBOFLAVIN 0.6-7 FL CRC USA
 SCOLYMOSE FL AYL
 BETA-SELINENE EO AYL
 SFA 350-2,325 FL USA
 BETA-SITOSTEROL LF HHB
 SODIUM 850-6,840 FL CRC USA
 STEARIC-ACID 30-200 FL USA
 STIGMASTEROL LF HHB

TANNIN
 TARAXASTEROL LF HHB
 THIAMIN 0.7-6 FL HHB USA
 VIT-B6 1-8 FL USA
 WATER 773,000-854,870 FL CRC USA
 ZINC 4-36 FL USA

CYPERUS ROTUNDUS L.

"NUTSEGE"

ALKALOIDS 2,100-2,400 RT HHB
 ARSENIC 0.29 RH CAL
 ASCORBIC-ACID 90 RT HHB
 CALCIUM 3,180 RH CAL
 CAMPHENE RT HHB
 1,8-CINEOLE RT HHB
 D-COPADIENE RT HHB
 COPAENE RT HHB
 COPPER 10 RH CAL
 GAMMA-CYMENE RT RIZ
 P-CYMOL RT HHB
 CYPERENE EO CCO
 CYPERENONE EO CCO
 CYPEROL EO CCO
 CYPEROLONE RH CCO
 ALPHA-CYPERONE 1,500-5,000 RT HHB
 WOI
 BETA-CYPERONE RH CCO
 CYPEROTUNDONE EO CCO
 EO 5,000-10,000 RT HHB
 D-EPOXYGUAINE RT HHB
 FLAVONIDS 12,500 RT HHB
 D-FRUCTOSE RT HHB
 D-GLUCOSE RT HHB
 IRON 430 RH CAL
 ISOCYPEROL RH CCO
 ISOKOBUSONE RH CCO
 KOBUSONE RH CCO
 LIMONENE EO HHB
 LINOLEIC-ACID RH CCO
 LINOLENIC-ACID RH CCO
 MAGNESIUM 1,500 RH CAL
 MANGANESE 28 RH CAL
 MUSTAKONE RT HHB
 MYRISTIC-ACID RH CCO
 OLEANOLIC-ACID TU CCO
 OLEANOLIC-ACID-3-O-
 NEOHESPERIDOSIDE TU CCO
 OLEIC-ACID RH CCO
 4ALPHA,5ALPHA-OXIDOEUEDESM-11-
 EN-3-ALPHA-OL RH CCO
 PATCHOULENONE RH CCO
 PECTIN 37,200 RT HHB
 BETA-PINENE RT HHB

POLYPHENOLS 16,200 RT HHB
 POTASSIUM 10,100 RH CAL
 RESIN 42,100 RT HHB
 ROTUNDENE RT RIZ
 ROTUNDENOL RT RIZ
 ROTUNDONE RT RIZ
 ALPHA-ROTUNOL RT RIZ
 BETA-ROTUNOL RT RIZ
 SELINATRIENE RT RIZ
 BETA-SELINENE RT HHB
 SITOSTEROL RT RIZ
 SODIUM 254 RH CAL
 STARCH 92,000 RT HHB
 STEARIC-ACID RH CCO
 SUGARS 132,200-144,000 RT HHB
 SUGENOL RH CCO
 SUGENOL RH CCO
 SUGETRIOL RH CCO
 ZINC 33 RH CAL

CYPHOMANDRA BETACEA

(CAV.) SENDT.

"TAMARILLO"

"TREE TOMATO"

ANTHOCYANINS FR ABS
 ASCORBIC-ACID 223-2,060 FR CRC JFM
 ASH 6,100-71,000 FR CRC JFM WOI
 CALCIUM 39-5,780 FR JFM CRC
 CARBOHYDRATES 103,000-838,000 FR
 CRC WOI
 BETA-CAROTENE 3-32 FR CRC JFM
 BETA-CRYPTOXANTHIN FR ABS
 FAT 600-64,000 FR CRC JFM WOI
 FIBER 14,000-243,000 FR CRC JFM WOI
 FRUCTOSE FR ABS
 IRON 6-57 FR CRC JFM WOI
 KILOCALORIES 3,290-3,550 FR CRC
 LUTEIN FR ABS
 MALTOSE FR ABS
 MALVIDIN-3-DIGLUCOSIDE PL JSG
 MALVIDIN-3-GLUCOSYL-GLUCOSE FR
 ABS
 NIACIN 10-85 FR CRC JFM
 NITROGEN 2,230-4,450 FR JFM
 PAEONIDIN-3-DIGLUCOSIDE PL JSG
 PAEONIDIN-3-GLUCOSYL-GLUCOSE FR
 ABS
 PECTIN FR ABS
 PELARGONIDIN-3-DIGLUCOSIDE PL
 JSG
 PELARGONIDIN-3-GLUCOSYL-
 GLUCOSE FR ABS

PHOSPHORUS 130-3,400 FR CRC JFM
 WOI
 PROTEIN 15,000-156,000 FR CRC WOI
 RIBOFLAVIN 0.3-3 FR CRC JFM
 SOLACARPOINE PL JSG
 STARCH 10,000-140,000 FR ABS
 SUCROSE FR ABS
 SUGARS 50,000-375,000 FR ABS
 THIAMIN 0.3-7 FR CRC JFM
 WATER 827,000-878,00 FR JFM WOI
 ZEAXANTHIN FR ABS

CYPRIPEDIUM PUBESCENS
 WILLD.

“LADYSLIPPER”

ALUMINUM 238 RT PED 1/
 ASH 58,000 RT PED
 CALCIUM 16,800 RT PED
 CHROMIUM 10 RT PED
 COBALT 9 RT PED
 EO RT KAD
 GALLIC-ACID RT KAD
 GLUCOSE RT KAD
 GUM RT KAD
 IRON 117 RT PED
 MAGNESIUM 1,090 RT PED
 MANGANESE 209 RT PED
 PHOSPHORUS 1,230 RT PED
 POTASSIUM 9,340 RT PED
 PROTEIN 113,000 RT PED
 SELENIUM 49 RT PED
 SILICON 222 RT PED
 SODIUM TR RT PED
 STARCH RT KAD
 TIN 33 RT PED
 ZINC 67 RT PED

CYRTOSPERMA CHAMISSONIS
 (SCHOTT) MERR.

“SWAMP TARO”

ALUMINUM 13-63 RT B&H
 ASCORBIC-ACID 0-762 RT B&H
 ASH 16,000-145,545 LF B&H
 ASH 5,700-35,925 RT B&H
 BORON 0.8-4 RT B&H
 CALCIUM 1,450-10,630 RT B&H
 CALCIUM-OXALATE 3,990-19,370 RT
 B&H
 BETA-CAROTENE 0-0.2 RT B&H
 CITRATES 500-2,425 RT B&H
 COPPER 0.9-4.4 RT B&H

FAT 6,000-54,545 LF B&H
 FAT 1,000-6,800 RT B&H
 FIBER 14,000-127,265 LF B&H
 FIBER 23,600-114,563 RT B&H
 IRON 4-22 RT B&H
 KILOCALORIES 348-3,164 LF B&H
 KILOCALORIES 619-3,005 RT B&H
 MAGNESIUM 180-1,215 RT B&H
 MALATES 1,060-8,250 RT B&H
 MANGANESE 2.2-12 RT B&H
 NIACIN 4-22 RT B&H
 OXALATE 2,970-14,565
 PHOSPHORUS 140-790 RT B&H
 POTASSIUM 530-2,575 RT B&H
 PROTEIN 32,000-290,900 LF B&H
 PROTEIN 4,500-27,670 RT B&H
 RIBOFLAVIN 0.2-1 RT B&H
 SODIUM 440-4,855 RT B&H
 STARCH 135,000-655,340 RT B&H
 SUCINATES 1,400-21,845 RT B&H
 SUGARS 5,000-51,455 RT B&H
 SULFUR 26-195 RT B&H
 THIAMIN 0.1-1.2 RT B&H
 WATER 890,000 LF B&H
 WATER 600,000-794,000 RT B&H
 ZINC 10-50 RT B&H

CYTISUS SCOPARIUS (L.) LINK.

“SCOTCH BROOM”

AESCULETIN FL HHB
 ASH 38,000 SD CRC
 CHRYSANTHEMEXANTHIN PL WOI
 CYTISINE SD ALK
 L-DOPA SD HHB
 DOPAMINE PL HHB
 EPININE PL HHB
 FAT 60,000 SD CRC
 FLAVOXANTHIN FL HHB
 FURFUROL PL HHB
 GENISTEINE FR ALK
 GIBBERELLIN-A-35 PL JSG
 8-GLYCOSYL-5,7,4'-TRIHIDROXY-
 3'METHOXYFLAVONE PL HHB
 HYDOXYLUPANINE SD ALK
 HYDOXYTYRAMINE FL ALK
 HYPEROSIDE FL HHB
 ISOSPARTEINE FL HHB
 LINOLEIC-ACID 30,960 SD HHB
 LUPANINE SD ALK
 LUTEOLIN PL HHB
 LUTEOLIN-4'-GLYCOSIDE PL HHB
 METHYLOXYTYRAMINE PL HHB
 ORIENTIN PL HHB

OXYTYRAMINE PL HHB
 PROTEIN 325,000 SD CRC
 QUERCETIN PL HHB
 QUERCETIN-GLYCOSIDE PL HHB
 SAROTHAMNINE FR WOI
 SCOPARIN PL WOI
 BETA-SITOSTEROL SD HHB
 SPARTEINE 2,500-15,000 PL CRC
 WOI
 TANNIN FL HHB
 TARAXANTHIN PL CRC
 TYRAMINE PL ALK
 L(+)-TYROSINE PL HHB
 VITEXIN FL HHB
 XANTHOPHYLL FL WOI
 XANTHOPHYLL-EPOXIDE FL WOI

***DAEMONOROPS DRACO* BL.**

“DRAGON’S BLOOD”

ABIETIC-ACID FR CRC
 BENZOIC-ACID FR CRC
 BENZOYL-ACETIC-ACID FR CRC
 BENZOYL-ACETIC-ESTER FR CRC
 CINNAMIC-ACID FR CRC
 DAMMARENOLIC-ACID FR CCO
 DIPTEROCARPOL FR CCO
 DRACOALBAN FR CRC
 DRACOALBAN-BENZOIC-ESTER (2.5%)
 FR CCO
 DRACOCARMIN FR CRC
 DRACORESENE (13.6%) FR CCO
 DRACORESINOTANNOL (56%) FR
 CRC
 DRACORHODIN FR CCO
 DRACORUBIN FR CRC CCO
 22-HYDROXYHOPANONE FR CCO
 ISOPIMARIC-ACID FR CCO
 5-METHOXY-7-HYDROXYFLAVAN FR
 CCO
 NORDRACORHODIN FR CCO
 NORDRACORUBIN FR CCO
 OLEANOLIC-ACID FR CCO
 OLEANOLIC-ALDEHYDE FR CCO
 PIMARIC-ACID FR CCO
 PTEROCARPAL PL JSG
 PTEROCARPOL FR CCO
 RESIN (82%) FR CRC
 SANDARACOPIMARIC-ACID FR
 CCO
 URSONIC-ALDEHYDE FR CCO

Most of these compounds occur in a resin
 scraped off the fruits.

***DAPHNE GENKWA* SIEB &
*ZUCC.***

“YUAN HUA”

APIGENIN FL CCO
 BENZOIC-ACID FL CCO
 GENKWANIN FL CCO
 GENKWANIN-5-GLYCOSIDE RT
 HHB
 GENKWADAPHNIN FL CCO
 GLUCOSE RT HHB
 HYDROXYGENKWANIN FL CCO
 3'-HYDROXYGENKWANIN PL JSG
 KAEMPFEROL3-O-BETA-D-(6"-P-
 COUMAROYL)GLUCOPYRANOSIDE
 FL CPB35:675
 LUTEOLIN FL CPB35:675
 LUTEOLIN-7-METHYLETHER FL
 CPB35:675
 BETA-SITOSTEROL FL CCO
 XYLOSE RT HHB
 YUANHUACINE RT CCO
 YUANHUADINE RT JE15:15
 YUANHUAFINE RT JE15:15
 YUANHUAPINE PL JSG
 YUANHUATINE RT JE15:15
 YUENKANIN 9000 RT HHB

***DAPHNE MEZEREUM* L.**

“SPURGE LAUREL”

“SPURGE OLIVE”

COCOBNINE FR HHB
 COCOGNINIC-ACID FR HHB
 DAPHNETOXIN BK CCO
 DAPHNETOXIN 200 SD HHB
 DAPHNIN PL CRC
 DAPHNOPSIDE PL CRC
 DAPHNORETIN BK CCO
 FAT 60,000-654,000 SD CRC
 HESPERIDIN PL CRC
 12-HYDROXYDAPHNETOXIN PL
 CRC
 MALIC-ACID BK HHB
 6-METHOXY-7-HYDROXY-3,7'-
 DICOUMARYLETHER FR HHB
 MEZEREIN 1,000 FR HHB
 PROTEIN 75,000-244,000 SD CRC
 BETA-SITOSTEROL PL CRC
 SUCROSE PL CRC
 UMBELLIFERTONE PL CRC

DATURA CANDIDA (PERS.)
SAFF.

“BORRACHERO”

“FLORIPONDIO”

ALKALOIDS 3,000-5,500 PL CRC
ATROPINE RT ALK
6BETA,7BETA-DIHYDROXYLITTORINE
PL JSG
3,6-DITIGLOYLOXYTROPANE RT ALK
3,6-DITIGLOYLOXYTROPANE-7-OL RT
ALK
HYOSCYAMINE RT ALK
HYOSCINE PL JSG
METELOIDINE LF FL RT SD ALK
NORATROPINE SH HHB
NORHYOSCYAMINE LF RT SD ALK
NORHYOSCINE PL JSG
NORSCOPOLAMINE PL HHB
SCOPOLAMINE 900-3,300 PL CRC
SCOPOLINE SH HHB
3ALPHA-TIGLOYLOXYTROPANE RT
HHB
TROPINE FL RT SD ALK HHB

DATURA INNOXIA MILL.

“THORN APPLE”

ALKALOIDS 5,170 FL HHB
ALKALOIDS 1,200-7,700 FR WOI
ALKALOIDS 2,500-5,500 LF WOI
ALKALOIDS 3,900 RT WOI
ALKALOIDS 2,300-4,400 SD CRC
ALKALOIDS 6,010 SH HHB
ALKALOIDS 3,000 ST WOI
APOATROPINE PL HHB
ATROPINE PL HHB
CUSCOHYGRINE 195-1,170 RT HHB
WOI
DATURADIOL PL JSG
DATURANOLONE PL JSG
DITIGLOYLTELOIDINE 75-1,650 LF
HHB WOI
DITIGLOYLTELOIDINE 80-1,015 RT
HHB WOI
DITIGLOYLTELOIDINE 60-600 ST HHB
WOI
(-)-3ALPHA,6BETA-
DITIGLOYLOXYTROPANE PL HHB
FAT 120,000-220,000 SD CRC
7-HYDROXY-3,6-
DITIGLOYLOXYTROPANE PL HHB
HYOSCYAMINE 1,880 FL HHB

HYOSCYAMINE 1,410-3,100 LF HHB
WOI
HYOSCYAMINE 480-925 SD CRC HHB
WOI
HYOSCYAMINE 860-1,870 RT HHB
WOI
HYOSCYAMINE 1,840 SH HHB
METELOIDINE 690-1,515 LF HHB WOI
METELOIDINE 40-390 RT HHB WOI
NORHYOSCYAMINE PL HHB
PROTEIN 200,000 SD CRC
PSEUDOTROPINE PL HHB
SCOPOLAMINE 670 FL HHB
SCOPOLAMINE 675-3,850 LF HHB WOI
SCOPOLAMINE 935-2,340 RT HHB WOI
SCOPOLAMINE 200-205 SD HHB WOI
SCOPOLAMINE 1,660 SH HHB
SCOPOLETIN PL HHB
TIGLOIDINE PL HHB
TROPINE PL HHB

DATURA METEL L.

“HINDU DATURA”

3ALPHA-ACETOXYTROPANE RT RAA
ALKALOIDS 1,700-9,800 FL RAA WOI
ALKALOIDS 890-2,700 FR RAA WOI
ALKALOIDS 700-5,500 LF RAA WOI
ALKALOIDS 900-5,500 PL RAA WOI
ALKALOIDS 1,000-7,000 RT RAA WOI
ALKALOIDS 1,700-5,900 SD RAA WOI
ALKALOIDS 1,900 SP RAA
ALKALOIDS 300-4,100 ST RAA WOI
ALLANTOIN SD WOI
APOHYOSCINE RT RAA
ASCORBIC-ACID 2,220 LF WOI
ATROPINE SD RAA
CAPROIC-ACID 1,200 SD WOI
COUMARINS SD RAA
CUSCOHYGRINE RT RAA
DATURANOLONE SD RAA
3ALPHA,6BETA-
DITIGLOYLOXYTROPANE RT RAA
3ALPHA,6BETA-
DITIGLOYLOXYTROPAN-7BETA-OL
RT RAA
FASTUSSIC-ACID SD HHB
FASTUSINE RT HHB
FASTUSININE SD ALK
FAT 100,000-120,000 SD HHB WOI
FESTUDINE SD RAA
FESTUNINE SD RAA
FESTUSIC-ACID SD RAA

7-HYDROXY-3,6-

DITIGLOYLOXYTROPANE RT HHB
 HYOSCINE RT RAA
 HYOSCYAMINE 2,330-3,560 RT RAA
 ALPHA-LINOLEIC-ACID 28,260 SD WOI
 BETA-LINOLEIC-ACID 3,500 SD WOI
 METELOIDINE RT RAA
 NORATROPINE RT RAA
 NORHYOSCINE RT RAA
 NORHYOSCYAMINE RT RAA
 OLEIC-ACID 73,000 SD WOI
 SCOPOLAMINE 1,750 LF RAA
 SCOPOLAMINE 1,170 RT RAA
 SCOPOLAMINE 340-3,235 SD RAA HHB
 SCOPOLAMINE 390 ST RAA
 TIGLOIDINE RT RAA
 3ALPHA-TIGLOYLOXYTROPANE RT
 RAA
 TROPINE RT RAA
 WITHAMETELIN PL JSG

DATURA STRAMONIUM L.

"JIMSONWEED"

ACETIC-ACID
 ACETONE LF HHB
 ACONITIC-ACID PL HHB
 AESCULETIN CCO
 ALKALOIDS 4,600 FR WOI
 ALKALOIDS 2,500-5,100 LF WOI
 ALKALOIDS 1,000-5,000 PL CRC
 ALKALOIDS 2,100 RT WOI
 ALKALOIDS 1,000 -5,000 SD HHB WOI
 ALKALOIDS 2,500-2,600 ST WOI
 APOATROPINE PL JSG
 ASCORBIC-ACID
 ATROPAMINE PL JSG
 ATROPINE 800-1,000
 ATROPINESTERASE
 BUTANOL LF HHB
 CAFFEIC-ACID PL HHB
 CAPSIDOL PL JSG
 CHLOROGENIC-ACID PL HHB
 CITRIC-ACID 750 PL HHB
 CUSCOHYGRINE LF HHB
 DATUGEN PL WOI
 DATUGENIN PL WOI
 DITIGLOYL-D-DEHYDROXYTROPANE
 PL HHB
 3-ALPHA,6-BETA-
 DITIGLOYLOXYTROPANE PL HHB
 EO 450 LF WOI
 ETHANOL
 FAT 150,000-300,000 SD HHB

FERULIC-ACID PL HHB
 FLURODATURATINE PL JSG
 FORMALDEHYDE
 FORMIC-ACID PL HHB
 FUMARIC-ACID PL HHB
 GALACTOSE LF HHB
 GLUCOSE LF HHB
 GLYCOLIC-ACID PL HHB
 HOMOFLURODATURATINE PL JSG
 4-HYDROXYLUBIMIN PL JSG
 HYOSCINE 550-2,500 LF HHB
 HYOSCINE 1,200-5,000 SD CRC
 HYOSCYAMINE 80-490 SD HHB WOI
 ISOBUTYRALDEHYDE
 ALPHA-KETOGLUTARIC-ACID PL HHB
 LACTIC-ACID PL HHB
 LIGNOCERIC-ACID
 LINOLEIC-ACID 22,500-45,000 SD HHB
 MALIC-ACID 2,120 PL HHB
 METELOIDINE LF HHB
 METHANOL LF HHB
 NEOCHLOROGENIC-ACID PL HHB
 NICOTINE PL HHB
 OLEIC-ACID 93,000-186,000 SD HHB
 WOI
 PALMITIC-ACID 15,000-30,000 SD HHB
 WOI
 POTASSIUM-NITRATE
 PROPIONALDEHYDE
 PROTEIN 140,000-194,000 SD
 PUTRESCINE PL HHB
 RUTIN
 SCOPIN PL HHB
 SCOPOLAMINE 53-3,050 SD HHB WOI
 SCOPOLETIN PL HHB
 SCOPOLIN PL HHB
 SITOSTEROL SD HHB
 SOPHOROSE LF HHB
 STEARIC-ACID
 SUCCINIC-ACID
 TANNIN 70,000
 TIGLOYLMETELOIDIN 5-25 PL HHB
 UMBELLIFERONE
 VITASTRAMONOLIDE PL JSG

DAUCUS CAROTA L.

"CARROT"

ACETALDEHYDE RT NAP
 ACETONE RT JAD
 ACETYLCHOLINE RT HHB
 ACORENONE SD
 AESCULETIN LF NAP
 ALANINE 590-4,830 RT USA

ALDOLASE TC NAP
 ALUMINUM 1-1,050 RT AAS USG
 AMMONIA(NH3) 3,970 RT NAP
 AMYLASE TC NAP
 ALPHA-AMYRIN RT NAP
 BETA-AMYRIN RT NAP
 ANILINE 31 RT NAP
 ANTHRAXANTHIN LF NAP
 APIGENIN FR NAP
 APIGENIN-7-O-BETA-D-
 GALACTOMANNOSIDE PL 411/
 APIGENIN-7-O-BETA-D-
 GALACTOPYRANOSYL-(1,4)-O-BETA-
 D-MANN...
 APIGENIN-4'-O-BETA-D-GLUCOSIDE SD
 NAP
 APIGENIN-7-O-BETA-D-GLUCOSIDE SD
 NAP
 APIGENIN-7-O-BETA-D-RUTINOSIDE
 SD NAP
 ARABINOSIDE RT NAP
 ARACHIC-ACID 270-936 SD NAP
 ARACHIDONIC-ACID PL PAS
 ARGININE 430-3,520 RT USA
 ARSENIC 0.0029-1 RT AAS USG (SOME
 STATE 400)
 ASARALDEHYDE SD NAP
 ASARONE 400 SD RT
 ASCORBIC-ACID 91-775 RT CRC USA
 ASH 56,000-79,000 (-150,000) RT PED
 USG
 ASPARTIC-ACID 1,370-11,220 RT USA
 ASTRAGALIN SD NAP
 AZULENE SD
 BARIUM 1.7-150 RT USG
 BENZOIC-ACID-4-O-BETA-D-GLU-
 COSIDE 11 RT NAP
 BENZYLAMINE 2.8 RT NAP
 BERGAMOTENE 200-700 SD
 ALPHA-BERGAMOTENE 2,000 RT NAP
 CIS-BETA-BERGAMOTENE RT
 BERGAPTEN 0.3 RT NAP
 BETAINE 35 RT NAP
 BIPHENYL 4 RT JAD NAP
 BETA-BISABOLENE 116 RT JAD NAP
 BETA-BISABOLENE 100-3,500 SD JAD
 NAP
 BETA-BISABOLENE 38 SH JAD NAP
 GAMMA-BISABOLENE 264 RT JAD NAP
 CIS-GAMMA-BISABOLENE 8 RT JAD
 NAP
 TRANS-GAMMA-BISABOLENE 268 RT
 JAD NAP
 BORNEOL RT NAP
 BORNYL-ACETATE 24 RT NAP 1/
 BORNYL-ACETATE 0.6SD
 BORON 1-36 RT AAS BOB JAD USG
 BROMINE 1-9 RT AAS
 BUTYRIC-ACID RT JAD
 CADMIUM 0.0116-0.6 RT USG
 CAFFEIC-ACID RT NAP
 CAFFEIC-ACID-4-O-BETA-D-GLU-
 COSIDE PL NAP
 CAFFEYOYLQUINIC-ACID RT NAP
 CALCIUM 210-5,710 RT FNF PED USA
 CAMPESTEROL RT NAP
 CAMPHENE 8 SD NAP
 CAMPHENE 1-70 SD
 CAMPHOR SD
 CAPRIC-ACID 1,360-7,065 SD NAP
 CARBOHYDRATES 101,000-850,000 RT
 FNF PED USA
 DELTA-3-CARENE 12-120 SD JAD
 CAR-6-ENE 56-112 SD NAP
 CAROTA-1,4-BETA-OXIDE 0.2-0.5 SD
 NAP
 CAROTATOXIN RT HHB
 ALPHA-CAROTENE 17-25 RT NSK35:315
 BETA-CAROTENE 27-673 RT NSK35:315
 CRC
 EPSILON-CAROTENE RT NAP
 GAMMA-CAROTENE RT NAP
 CAROTOL 8 RT JAD NAP
 CAROTOL 1,150-8,000 SD JAD NAP
 CAROTOL 1,450 SH JAD NAP
 CARVONE SD
 CARYOPHYLLENE 200 RT JAD NAP
 CARYOPHYLLENE 134-1,000 SD JAD
 ALPHA-CARYOPHYLLENE RT HHB
 BETA-CARYOPHYLLENE 55-170 SD
 JAD NAP
 BETA-CARYOPHYLLENE 24 SH JAD
 NAP
 CARYOPHYLLENE-OXIDE 310-350 SD
 RT AYL
 CHLOROGENIC-ACID RT NAP
 TRANS-CHLOROGENIC-ACID SH NAP
 CHLOROPHYLL PL PAS
 CHOLESTEROL LF NAP
 CHOLINE 36 RT JAD NAP
 CHOLINE 73 SH JAD NAP
 CHROMIUM 0.005-1.5 RT AAS USG
 CHRYSIN SD NAP
 CINNAMIC-ACID TC NAP
 TRANS-CINNAMIC-ACID TC NAP
 CITRAL 200 SD
 CITRIC-ACID RT JAD NAP
 CITRONELLYL-ACETATE 150-200 SD

- COBALT <0.005-0.058 RT AAS USG
 COPPER 0.3-18 RT AAS USA USG
 COSMOSIN LF NAP
 P-COUMARIC-ACID RT NAP
 P-COUMARIC-ACIDO-BETA-D-GLUCOSIDE SH NAP
 COUMARIN RT SD
 CROCETIN LF NAP
 BETA-CRYPTOXANTHIN RT NAP
 CUMINALDEHYDE SD
 ALPHA-CURCUMENE SD
 CYANIDIN-3,5-DIGALACTOSIDE TC NAP
 CYANIDIN-DIGLYCOSIDE RT NAP
 CYANIDIN-3-GALACTOSIDE TC NAP
 CYANIDIN-3-GLUCOGALACTOSIDE TC NAP
 CYANIDIN-3-O-BETA-D-GLUCOSIDE TC NAP
 CYANIDIN-3-(SINAPOYL-XYLOSYL-GLUCOSYL)-GALACTOSIDE LF NAP
 P-CYMENE 12 RT NAP
 P-CYMENE 10-160 SD JAD
 P-CYMEN-8-OL 9,000 SD NAP
 CYSTEINE TC NAP
 CYSTINE 80-655 RT USA
 DAUCARIN SD NAP
 DAUCENE 200 SD
 DAUCIC-ACID RT NAP
 DAUCINE PL JSG
 DAUCOL 60-1,960 SD JAD NAP
 DAUCOL 535 SH JAD NAP
 DAUCOSTEROL RT
 DECA-TRANS-2-TRANS-4-DIEN-1-AL TR RT JAD NAP
 GAMMA-DECALACTOSE SD
 GAMMA-DECANOLACTONE RT
 DEC-2-EN-1-AL 1.6 RT JAD NAP
 DEHYDROASCORBIC-ACID RT NAP
 DEHYDROXYDAUCOL SD NAP
 DEOXY-RIBONUCLEASE TC NAP
 5,7-DIHYDROXY-2-METHYL-CHROMONE RT NAP
 3,4-DIMETHOXY-ALLYL-BENZENE RT NAP
 6-(GAMMA,GAMMA-DIMETHYL-ALLYL-AMINO)-PURINE TC NAP
 DIOSGENIN 5,400-6,000 RT TC NAP
 DIPENTENE RT AYL
 DODECAN-1-AL TR RT JAD NAP
 BETA-ELEMENE PL AYL
 ELEMICIN 2,000 SD NAP
 EO 4,000 (ASSUMED) RT
 EO 4,000-8,000 SD GEO
 EO 4,000 (ASSUMED) SH
 EPOXYDIHYDROCARYOPHYLLENE 250-2,000 SD
 ETHANOL RT NAP
 ETHYLAMINE 1 RT NAP
 ETHYLENE TC NAP
 ETHYL-METHYL-AMINE 7 RT NAP
 EUGENIN TC NAP
 EUGENOL 7,000 SD NAP
 FALCARINDIOL 88 RT NAP
 FALCARINOL 10-47 RT NAP
 BETA-FARNESENE 12 RT NAP
 FAT 1,700-29,000 RT CRC USA
 FAT 87,000-302,000 DS CRC
 FERULIC-ACID RT NAP
 FERULIC-ACID-O-BETA-D-GLUCOSIDE SH NAP
 FIBER 10,000-134,000 RT CRC PED USA
 FLUORINE 0.03-1.8 RT AAS
 FOLACIN 0.1-1.2 RT USA
 FORMIC-ACID PL JAD
 FRUCTOSE RT NAP
 FUMARASE TC NAP
 FUMARIC-ACID RT NAP
 GALACTOSE RT NAP
 BETA-GALACTOSIDASE TC NAP
 GENTISIC-ACID TC NAP
 GERANIOL 10-8,120 SD RT JAD
 GERANYL-ACETATE 265 SH NAP
 GERANYL-ACETONE 300 SD NAP
 GERANYL-FORMATE SD
 GERANYL-ISOBUTYRATE 500 SD NAP
 GERANYL-2-METHYLBUTYRATE 3,000 SD NAP
 4-BETA-D-GLUCOPYRANOSYL-OXY-BENZOIC-ACID 65 SD NAP
 D-GLUCOSE 80,000 RT HHB
 ALPHA-GLUCOSIDASE TC NAP
 BETA-GLUCOSIDASE TC NAP
 BETA-GLUCURONIDASE TC NAP
 GLUTAMATE-OXALACETATE-TRANSAMINASE TC NAP
 GLUTAMATE-PYRUVATE-TRANSAMINASE TC NAP
 GLUTAMINE RT HHB
 GLUTAMIC-ACID 2,020-16,545 RT USA
 GLYCINE 300-2,455 RT USA
 ALPHA-GURJUNENE SD
 N-HENTRIACONTANE SD NAP
 N-HEPTACOSANE SD NAP
 HEPTAN-1-AL 2 RT JAD NAP
 HERACLENIN RT JAD
 HCN RT JAD
 HISTIDINE 160-1,310 RT USA

ALPHA-HUMULENE 12 RT JAD NAP
 P-HYDROXYBENZOIC-ACID RT NAP
 (-)-6-HYDROXY-MELLEIN RT NAP
 8-HYDROXY-6-METHOXY-3-METHYL-
 3,4-DIHYDRO-ISOCOUMARIN TC NAP
 4-HYDROXYPROLINE
 INDOLE-ACETIC-ACID TC NAP
 INVERTASE TC NAP
 IONENE RT NAP
 ALPHA-IONONE RT NAP
 BETA-IONONE 300 SD NAP
 IRON 3-300 RT AAS CRC USA USG
 TRANS-ISOASARONE PL HHB
 ISOBUTYRIC-ACID PL JAD
 ISOCHLOROGENIC-ACID LF NAP
 ISOCITRIC-ACID RT NAP
 ISOLEUCINE 410-3,360 RT USA
 ISOPIMPINELLIN RT JAD
 ISOPRENE RT NAP
 KAEMPFEROL SD NAP
 KAEMPFEROL-3-O-BETA-D-GLUCOSIDE
 RT 411/
 ALPHA-KETOGLUTARIC-ACID
 RT HHB
 KILOCALORIES 2,710 RE PED
 KILOCALORIES 430-3,520 RT USA
 LAURIC-ACID 20-165 RT USA
 LAURIC-ACID 1,810-6,280 SD NAP
 LEAD 0.01-2 RT AAS USG
 LECITHIN RT HHB
 LECITHINASE WOI
 LEUCINE 430-3,520 RT USA
 LIMONENE 150 RT JAD NAP
 LIMONENE 20-1,500 SD JAD NAP
 LIMONENE 26 SH NAP
 LINALOOL 32 RT JAD NAP
 LINALOOL 4-600 SD JAD NAP
 LINOLEIC-ACID 670-5,485 RT USA
 LINOLEIC-ACID 9,360-43,400 SD NAP
 LINOLENIC-ACID 100-820 RT USA
 ALPHA-LINOLENIC-ACID 270-935 SD
 NAP
 GAMMA-LINOLENIC-ACID 540-1,870 SD
 NAP
 LITHIUM 0.23-0.6 RT USG
 LUPEOL RT NAP
 LUTEIN RT NAP
 LUTEOLIN PL PAS
 LUTEOLIN-4'-O-BETA-D-DIGLUCOSIDE
 SD NAP
 LUTEOLIN-4'-O-BETA-GLUCOSIDE SD
 NAP
 LUTEOLIN-7-O-BETA-D-DIGLUCOSIDE
 SD NAP
 LUTEOLIN-7-O-BETA-GLUCOSIDE SD
 NAP
 LUTEOLIN-7-O-BETA-GLUCOSIDE 100
 RT NAP
 LUTEOLIN-7-O-BETA-GLUCURONIDE
 PL NAP
 LUTEOLIN-7-O-(6"-O-MALONYL)-BETA-
 D-DIGLUCOSIDE PL NAP
 LUTEOLIN-7-O-BETA-RUTINOSIDE SD
 NAP
 LYCOPENE 80-140 RT NSK35:315
 LYSINE 400-3,275 RT USA
 MAGNESIUM 100-1,980 (-7,500) RT AAS
 USG
 MALIC-ACID RT HHB
 MALTOSE RT JAD
 MALVIDIN-3,5-DIGLUCOSIDE RT NAP
 MANGANESE 1-62 RT AAS USA USG
 MANNOSE RT NAP
 MERCURY 0.00058-0.045 RT AAS USG
 METHIONINE 70-575 RT USA
 2-METHOXY-3-SEC-BUTYL-PYRAZINE
 RT NAP
 (-)-6-METHOXY-MELLEIN RT NAP
 3-METHOXY-4,5-METHYLENEDIOXY-
 PROPYL-BENZENE RT NAP
 5-METHOXY-PSORALEN PL PAS
 METHYLAMINE 3,970 RT NAP
 N-METHYL-ANILINE 0.8 RT NAP
 N-METHYL-BENZYLAMINE 16 RT NAP
 4-METHYL-ISO-PROPENYL-BENZENE
 SD NAP
 N-METHYL-PHENETHYLAMINE 2 RT
 NAP
 METHYLPENTOSANS PL JAD WOI
 MEVALONIC-ACID 4 RT NAP
 MOLYBDENUM <0.1-0.7 RT AAS USG
 MUFA 80-655 RT USA
 GAMMA-MUROLONE 3,000 RT NAP
 MYRCENE 10-250 SD
 MYRICETIN FR 411/
 MYRISTIC-ACID 10-80 RT USA
 MYRISTIC-ACID 10,470-36,300 SD NAP
 MYRISTICIN 0.5-34 RT HHB JAD NAP
 MYRISTOLEIC-ACID SD NAP
 NEOXANTHIN LF NAP
 NEUROSPORENE RT NAP
 NIACIN 8-82 RT FNF PED USA
 NICKEL 0-2 RT USG
 NITROGEN 1,400-20,000 RT AAS
 N-NONACOSANE SD NAP
 NONAN-1-AL 0.8 RT NAP
 NON-2-EN-1-AL 12 RT NAP
 NOPOL RT NAP

- 3'-NUCLEOTIDASE TC NAP
 N-OCTACOSANE SD NAP
 OCTAN-1-AL 8 RT JAD NAP
 2-OCTANONE SD
 OLEIC-ACID 60-490 RT USA
 OLEIC-ACID 55,800-230,300 SD NAP
 OSTHOL 610 PL NAP
 OSTHOLE RT JAD
 OXALIC-ACID 56 RT JAD WBB
 OXYPEUCEDANIN RT JAD
 PALMITIC-ACID 230-1,885 RT USA
 PALMITIC-ACID 3,265-11,500 SD NAP
 PALMITOLEIC-ACID 20-165 RT USA
 PALMITOLEIC-ACID 270-1,725 SD NAP
 PANTOTHENIC-ACID 2-17 RT USA
 PECTIN 100,000-188,000 RT HHB USA
 WOI
 PECTINESTERASE RT NAP
 PENTOSANS PL WOI
 PEROXIDASE RT NAP
 PETROSELINIC-ACID 712,000 SD NAP?
 ALPHA-PHELLANDRENE RT NAP
 BETA-PHELLANDRENE 177 SH NAP
 PHENYLALANINE 320-2,620 RT USA
 PHENYLALANINE-AMMONIA-LYASE
 TC NAP
 PHOSPHATIDYL-CHOLINE TC NAP
 PHOSPHATIDYL-ETHANOLAMINE TC
 NAP
 PHOSPHATIDYL-GLYCEROL TC NAP
 PHOSPHATIDYL-INOSITOL TC NAP
 PHOSPHOFRUCTOKINASE RT NAP
 PHOSPHORUS 340-5,090 (-7,500) RT AAS
 CRC USA USG
 PHYTIN 52,700 RT WOI
 PHYTOENE PL HHB
 PHYTOFLUENE RT NAP
 PHYTOSTEROLS 120-980 RT USA
 ALPHA-PINENE 48 RT JAD NAP
 ALPHA-PINENE 12-1,300 SD JAD NAP
 ALPHA-PINENE 12 SH JAD NAP
 BETA-PINENE 4 RT JAD NAP
 BETA-PINENE 50-5,500 SD
 BETA-PINENE 44 SH JAD NAP
 PIPECOLIC-ACID HHB
 POTASSIUM 3,000-46,360 RT AAS CRC
 PED USA
 PROLINE 290-2,375 RT USA
 PROTEIN 72,000-106,000 RT CRC PED
 PSORALEN 0.3 RT NAP
 PSORALEN 0.8 SH NAP
 PUFA 770-6,300 RT USA
 PUTRESCINE TC NAP
 PYRROLIDINE PL JAD
 QUERCETIN SD NAP
 QUERCETIN-3-O-BETA-GLUCOSIDE SD
 NAP
 QUERCITRIN PL PAS
 QUINIC-ACID RT NAP
 RHAMNOSE RT NAP
 RIBOFLAVIN 0.6-5 RT CRC PED USA
 RIBONUCLEASE TC NAP
 RUBIDIUM 0.42-12.7 RT AAS
 SABINENE 50-2,000 SD
 SABINENE 160 RT NAP
 SAKURANETIN FR 411/
 SCOPOLETIN RT NAP
 SELENIUM 0.00116-0.02 (-0.064) RT USG
 BETA-SELINENE 118-410 SD JAD NAP
 SERINE 350-2,865 RT USA
 SERINE PL PAS
 SFA 300-2,455 RT USA
 SHIKIMIC-ACID RT NAP
 SILICON 1-91 RT AAS
 BETA-SITOSTEROL RT NAP
 BETA-SITOSTEROL-GLYCOSIDE HHB
 SODIUM 340-9,504 RT CRC USA USG
 STARCH 14,800-25,200 RT WOI
 STEARIC-ACID 10-80 RT USA
 STEARIC-ACID 285-1,240 SD NAP
 STIGMASTEROL RT NAP
 STRONTIUM 1-148 RT USG
 SUBERIN RT NAP
 SUCCINIC-ACID RT NAP
 SUCROSE 60,000-339,000 RT HHB JAD
 WOI
 SULFUR 52-1,635 RT AAS USG
 SYRINGIC-ACID RT NAP
 TARAXASTEROL SH NAP
 TARTARIC-ACID RT NAP
 TERPINEN-4-OL 28 RT JAD NAP
 ALPHA-TERPINENE 28 RT JAD NAP
 ALPHA-TERPINENE 20-40 SD JAD NAP
 GAMMA-TERPINENE 216 RT JAD NAP
 ALPHA-TERPINEOL 28 RT JAD NAP
 TERPINEOL-ACETATE 746 SH NAP
 TERPINOLENE 1,520 RT JAD NAP
 TERPINOLENE 10 SD JAD
 TETRADECENOIC-ACID RT NAP
 THERMOPSOSIDE LF NAP
 THIAMIN 1-6 RT CRC USA
 THREONINE 380-3,110 RT USA
 ALPHA-THUJENE 12 SH JAP NAP
 TIGLIC-ACID SD NAP
 TIN 0-3 RT USG
 TITANIUM 0.017-30 RT JAD USG
 ALPHA-TOCOPHEROL 788 LF CCG
 ALPHA-TOCOPHEROL 4-36 RT USA

TOLUIDENE 7.2 RT NAP
 TRANS-BETA-BERGAPTENE 170 SD
 TRANS-1,10-HEPTADECADIENE-5,7-
 DIYN-3-OL HHB
 TRANS-2(7)-2,6-DIMETHYLOCTA-4,6-
 DIENE
 TRYPTOPHAN 110-900 RT USA
 TYROSINE 200-1,640 RT USA
 UBIQUINONE-100 TC NAP
 UMBELLIFERONE LF JAD NAP
 UMBELLIFEROSE PL JAD
 URONIC-ACID RT NAP
 VALINE 440-3,600 RT USA
 VANILLIC-ACID TC NAP
 P-VINYL-GUAIACOL 4,000 SD NAP
 VIOLAXANTHIN LF NAP
 VIT-B6 1-13 RT USA
 VIT-D WOI
 VIT-E WOI
 WATER 858,000-907,000 RT USG
 XANTHOPHYLLS 12-16 RT NSK35:315*
 XANTHOTOXIN 0.3 RT NAP
 XANTHOTOXIN 1.6 SH NAP
 XYLITOL RT NAP
 XYLOSE RT NAP
 ZINC 2-79 RT USA USG
 ZIRCONIUM 1-2 RT USG
 ZOSIMIN PL JAD

*NSK=Nippon Shokuhin Kogyo Gakkaishi
 35:315-20.1988 NAP values often derived
 by calculation JAD=often derived from
 Duke's Ginseng: A Concise Handbook
 (1989) AAS=ACTA AGRIC SCAND
 SUPPL 22 H2O (RT)=89%; ZMB=9.09 X
 APB

DENDROBIUM NOBILE LINDL.

"NOBLE DENDROBIUM"

ARSENIC 0.05 ST CAL
 CALCIUM 6,530 ST CAL
 COPPER 9 ST CAL
 DENBINOBIN PL CCO
 DENDRAMINE PL JSG
 DENDRIN ST CCO
 DENDRINE PL JSG
 DENDROBINE ST CCO
 DENDROBINE-N-OXIDE PL JSG
 DENDROXINE ST CCO
 6-HYDROXYDENDROBINE ST CCO
 4-HYDROXYDENDROXINE ST CCO
 6-HYDROXYDENDROXINE ST CCO
 IRON 90 ST CAL

N-ISOPENTENYLDENDROBIUM-
 BROMIDE PL JSG
 N-ISOPENTENYLDENDROXINE PL JSG
 N-ISOPENTENYLDENDROXINIUM-
 CHLORIDE PL JSG
 N-ISOPENTENYL-6-
 HYDROXYDENDROXINIUM-CHLO-
 RIDE PL JSG
 MAGNESIUM 520 ST CAL
 MANGANESE 53 ST CAL
 MERCURY 0.05 ST CAL
 NOBILINE PL JSG
 NOBILOMETHYLENE ST CCO
 NOBILONINE ST CCO
 6-OXYDENDROBINE ST CCO
 6-OXYDENDROXINE ST CCO
 POTASSIUM 7,200 ST CAL
 BETA-SITOSTEROL PL JSG
 BETA-SITOSTEROL-BETA-D-GLU-
 COSIDE PL JSG
 SODIUM 156 ST CAL
 ZINC 26 ST CAL

DICTAMNUS ALBUS L.

"BURNING BUSH; DITTANY;
 GAS PLANT"

ANETHOL FL WOI
 AURAPTEN LF HHB
 BERGAPTEN RT HHB
 CHOLINE RT WOI
 CINEOLE LF HHB
 CYANIDIN-RHAMNOGLUCOSIDE LF
 HHB
 P-CYMOL LF HHB
 DELPHINIDIN-RHAMNOGLUCOSIDE LF
 HHB
 DICTAMNINE 500 RT HHB WOI
 DICTAMNOLACTONE RT HHB
 DICTAMNOLIDE RT WOI
 DIOSMIN LF HHB
 EO 500 FL WOI
 EO 1,500 LF WOI
 GAMMA-FAGARINE 30 RT HHB
 FRAXINELLONE RT PL CCO WOI
 ISODICTAMNINE JAD
 ISOMACULOSIDINE JAD
 ISOQUERCITRIN LF HHB
 LIMONENE LF HHB
 LIMONIN RT CCO
 METHYL-CHAVICOL FL WOI
 MYRCENE LF HHB
 MYRICETIN LF HHB
 OBACULACTONE RT WOI

OBACUNONE RT WOI
 PHENOLCARBONIC-ACID RT HHB
 PRESKIMMIANINE JAD
 PSORALEN LF HHB
 RUTIN LF HHB
 SAPONIN RT HHB
 BETA-SITOSTEROL LF HHB
 SKIMMIANINE LF HHB
 TRIGONELLINE RT WOI
 XANTHOTOXIN LF HHB

DIEFFENBACHIA SEGUINE
 (JACQ.) SCHOTT

“DUMBCANE”

L-ASPARAGINE PL CRC
 CALCIUM-OXALATE PL CRC
 DUMBCAIN PL HHB

DIGITALIS LANATA EHRH.

“GRECIAN FOXGLOVE”

ACETYLCHOLINE LF HHB
 ACETYLDIGITOXINS 50-300 LF HHB
 ACETYLDIGOXINS 50-300 LF HHB
 ACETYLGITALOXINS 10-20 LF HHB
 ACETYLGITOXINS 10-50 LF HHB
 CAMPESTEROL PL JSG
 CHOLESTEROL PL JSG
 CHOLINE 1,000 LF HHB
 CYCLOARTENOL LF JSG
 DESACETYLLANATOSIDE-C 50-120 LF HHB
 DESACETYLLANATOSIDE-C 20 SD HHB
 DIGILANIDASE LF HHB
 DIGILUTEIN LF HHB
 DIGINATIGENIN <2 LF HHB
 DIGINATIN <50 LF HHB
 DIGIPROSIDE 10-30 LH HHB
 DIGITOGENIN PL JSG
 DIGITOXIGENIN 50-200 LF HHB
 DIGITOXIGENIN-ALLOMETHYLOSIDE <5 LF HHB
 DIGITOXIGENIN-BISDIGITOXOSIDE 5 LF HHB
 DIGITOXIGENIN-DIGILANIDOBIOSIDE PL JSG
 DIGITOXIGENIN-GLUCOMETHYLOSIDE 30-100 LF HHB
 DIGITOXIGENIN-GLUCOSIDE 10-30 LF HHB
 DIGITOXIGENIN-GLUCOSIDE 20 SD HHB

DIGITOXIN 50-200 LF HHB
 DIGOXIGENIN 5-20 LF HHB
 DIGOXIGENIN-DIGITOXOSIDE <50 LF HHB
 DIGOXIN 50-200 LF HHB
 DIGOXOSIDE LF HHB
 EVATROMONOSIDE 30-50 LF HHB
 GITALOXIGENIN 1-10 LF HHB
 GITALOXIN 50 LF HHB
 GITOROSIDE 50-200 LF HHB
 GITOXIGENIN 5-20 LF HHB
 GITOXIGENIN-FUCOSIDE 5 LF HHB
 GITOXIN 10-50 LF HHB
 GLUCODIGIFUCOSIDE 100-300 LF HHB
 GLUCODIGIFUCOSIDE 100-200 SD HHB
 GLUCOGITOFUCOSIDE 50-100 SD HHB
 GLUCOGITOROSIDE 500-100 SD HHB
 GLUCODIGITOXIGENIN-ACETYLGLUCOMETHYLOSIDE 10-30 LF HHB
 GLUCODIGITOXIGENIN-ACETYLGLUCOMETHYLOSIDE 20 SD HHB
 GLUCODIGITOXIGENIN-ALLOMETHYLOSIDE 50-100 LF HHB
 GLUCODIGITOXIGENIN-ALLOMETHYLOSIDE 20 SD HHB
 GLUCODIGITOXIGENIN-BISDIGITOXOSIDE 20-120 LF HHB
 GLUCODIGITOXIGENIN-BISDIGITOXOSIDE 20-120 LF HHB
 GLUCODIGITOXIGENIN-GLUCOMETHYLOSIDE 10 LF HHB
 GLUCODIGITOXIGENIN-GLUCOMETHYLOSIDE 100-200 SD HHB
 GLUCODIGOXIGENIN-BISDIGITOXOSIDE 150-500 LF HHB
 GLUCODIGOXIGENIN-BISDIGITOXOSIDE 30-50 SD HHB
 GLUCODIGOXIGENIN-DIGITOXOSIDE 50-100 LF HHB
 GLUCODIGOXIGENIN-DIGITOXOSIDE 30-50 SD HHB
 GLUCO-EVATROMONOSIDE 200-600 LF HHB
 GLUCO-EVATROMONOSIDE 800-1,300 SD HHB
 GLUCOGITALOXIN 10-30 LF HHB
 GLUCOGITOFUCOSIDE 50-200 LF HHB
 GLUCOGITOROSIDE 200-600 LF HHB
 GLUCOLANADOXIN 200-1,200 LF HHB
 GLUCOLANADOXIN 300 SD HHB
 GLUCOVERODOXIN 200-1,000 LF HHB

GLUCOVERODOXIN 200-300 SD HHB
 GLYCOSIDES 10,000 LF HHB
 28-ISOFUCOSTEROL PL JSG
 LANADOXIN 50-200 LF HHB
 LANAGITOSIDE LF HHB
 LANATIGONIN PL JSG
 LANATIGOSIDE LF HHB
 LANATOSIDE-A 800-2,400 LF HHB
 LANATOSIDE-A 100-200 SD HHB
 LANATOSIDE-B 100-500 LF HHB
 LANATOSIDE-B 10-20' SD HHB
 LANATOSIDE-C 800-2,400 LF HHB
 LANATOSIDE-C 50-100 LF HHB
 LANATOSIDE-D 20-100 LF HHB
 LANATOSIDE-D 100 SD HHB
 LANATOSIDE-E 50-200 LF HHB
 LANATOSIDE-E 30-50 SD HHB
 LUTEOLIN LF HHB
 1-METHOXY-2-METHYL-ANTHRAQUI-
 NONE LF HHB
 3-METHOXY-2-METHYL-ANTHRAQUI-
 NONE LF HHB
 24-METHYLENECYCLOARTENOL LF
 JSG
 4-METHYL-SCUTELLAREIN LF HHB
 NEOACETYLDIGOXIN <50 LF HHB
 NEODESACETYLLANATOSIDE-C 5-20
 LF HHB
 NEODESACETYLLANATOSIDE-C 5 SD
 HHB
 NEODIGAGENIN PL JSG
 NEODIGITALOGENIN PL JSG
 NEODIGITOGENIN PL JSG
 NEODIGOXIN <50 LF HHB
 NEODIGOXOSIDE LF HHB
 NEOGLUCODIGIFUCOSIDE 200-500 LF
 HHB
 NEOGLUCOVERODOXIN 20-100 LF
 HHB
 NEOLANATOSIDE-C 20-100 LF HHB
 NEOLANATOSIDE-C 50 SD HHB
 NEOODOROBIOSE-G 30-100 LF HHB
 ODOROBIOSE-G 10-30 LF HHB
 ODOROBIOSE-G 50-100 SD HHB
 ODOROBIOSE-H 5 LF HHB
 PURPUREAGLYCOSIDE-A 30-100 LF
 HHB
 PURPUREAGLYCOSIDE-A 20-250 SD
 HHB
 PURPUREAGLYCOSIDE-B 200-800 LF
 HHB
 PURPUREAGLYCOSIDE-B 20 SD HHB
 SCUTELLAREIN LF HHB
 STROSPESIDE 50-200 LF HHB

TIGONIN LF HHB
 5,7,4'-TRIHYDROXY-3',6'-
 DIMETHOXYFLAVONE LF HHB
 5,7,4'-TRIHYDROXY-6-
 METHOXYFLAVONE LF HHB
 VERODOXIN 50-100 LH HHB

DIGITALIS PURPUREA L..

“PURPLE FOXGLOVE”

ACETIC-ACID LF WOI
 ACETYLCHOLINE LF HHB
 16-ACETYLGITOXIN LF HHB
 APIGENIN FL HHB
 APIGENIN-GLUCOSYLAPIOSIDE FL
 HHB
 BENZOIC-ACID LF WOI
 CAFFEIC-ACID LF HHB
 CARDEONOLIDES 1,600-4,000 LF HHB
 CHLOROGENIC-ACID LF HHB
 CEROTIC-ACID LF HHB
 CHOLINE LF HHB
 CITRIC-ACID LF WOI
 P-COUMARIC-ACID LF HHB
 CYANIDIN-3,5-DIGLUCOSIDE LF HHB
 DEGALACTOTIGOXENIN LF HHB
 DESGLUCODIGITONIN 2,500 SD HHB
 DIGACETENIN LF HHB
 DIGALOGENIN LF HHB
 DIGALONIN LF HHB
 DIGICITRIN LF HHB
 DIGIFOLEIN LF HHB
 DIGIFUCOCELLOBIOSIDE 30 SD HHB
 DIGININ LF HHB
 DIGIPRONIN LF HHB
 14ALPHA-DIGIPRONIN PL JSG
 DIGIPROSIDE 5 LH HHB
 DIGIPURPURIN 225-560 LF HHB
 DIGIPURPUROGENIN PL JSG
 DIGITALIN PL JSG
 DIGITALONIN LF HHB
 DIGITOGENIN LF HHB
 DIGITOLUTEIN LF HHB
 DIGITONIN LF HHB
 DIGITOPURPON LF HHB
 DIGITOXIGENIN 1-10 LF HHB
 DIGITOXIGENIN-BISDIGITOXOSIDE 10-
 30 LF HHB
 DIGITOXIGENIN-GLUCOMETHYLOSIDE
 30-100 LF HHB
 DIGITONIN 4,000 SD HHB
 DIGITOXIN 20-3,000 LF HHB WOI
 6,8-DIHYDROXYMYRICETIN LF HHB
 DINATIN LF HHB

- EVATROMONOSIDE 5-50 LF HHB
 FAT 12,200 LF WOI
 FAT 500,000 SD HHB
 FERULIC-ACID LF HHB
 FORMIC-ACID LF WOI
 GALLIC-ACID LF WOI
 GITALIN 3,000-9,000 LF WOI
 GITALOXIGENIN 1-10 LF HHB
 GITALOXIGENIN-BISDIGITOXOSIDE 1-20 LF HHB
 GITALOXIN 10-300 LF HHB
 GITOGENIN 2,000-3,000 LF HHB
 GITONIN LF HHB
 GITONIN 1,500 SD HHB
 F-GITONIN LF HHB
 GITORIN PL JSG
 GITOROSIDE 5-30 LF HHB
 GITOSTIN 200 SD HHB
 GITOXIGENIN 1-10 LF HHB
 GITOXIGENIN-BISDIGITOXOSIDE 1-20 LF HHB
 GITOXIN 20-250 LF HHB
 GITOXINCELLOBIOSIDE 2 SD HHB
 GITOXOSIDE PL JSG
 GLUCODIGIFUCOSIDE 10-30 LF HHB
 GLUCODIGIFUCOSIDE 600 SD HHB
 GLUCODIGITOXIGENIN-BISDIGITOXOSIDE 20-120 LF HHB
 GLUCODIGITOXIGENIN-BISDIGITOXOSIDE 10 SD HHB
 GLUCODIGITOXIGENIN-GLUCOMETHYLOSIDE LF HHB
 GLUCO-EVATROMONOSIDE 20-250 LF HHB
 GLUCO-EVATROMONOSIDE 200 SD HHB
 GLUCOGITALOXIGENIN-BISDIGITOXOSIDE 10-100 LF HHB
 GLUCOGITALOXIGENIN-BISDIGITOXOSIDE 20 SD HHB
 GLUCOGITALOXIN 100-1,000 LF HHB
 GLUCOGITALOXIN 200 SD HHB
 GLUCOGITOROSIDE 20-150 LF HHB
 GLUCOGITOROSIDE 30 SD HHB
 GLUCOGITOXIGENIN-BISDIGITOXOSIDE 20-80 LF HHB
 GLUCOLANADOXIN 20-200 LF HHB
 GLUCOLANADOXIN 150 SD HHB
 GLUCOVERODOXIN 100-400 LF HHB
 GLUCOVERODOXIN 1,000 SD HHB
 4-HYDROXYDIGITOLUTEIN LF HHB
 INOSITOL LF HHB
 ISOCHRY SOPHANOL LF HHB
 LACTIC-ACID LF WOI
 LANADOXIN 5-30 LF HHB
 LANAFOLIN LF HHB
 LOLIOLIDE LF HHB
 LUTEOLIN LF HHB
 LUTEOLIN-DIGLUCOSIDE FL HHB
 LUTEOLIN-7-D-GLUCOSIDE LF HHB
 LUTEOLIN-L-7-GLUCOSYL-GLUCURONIDE LF HHB
 LUTEOLIN-L-7-GLUCURONIDE LF HHB
 LUTEOLIN-5-XYLOSIDE-7-GLUCURONIDE LF HHB
 LUTEOLIN-7-XYLOSIDE-5-GLUCURONIDE LF HHB
 MELISSYL-ALCOHOL LF HHB
 1-METHOXY-2-HYDROXY-3-METHYL-ANTHRAQUINONE LF HHB
 3-METHOXY-2-METHYL-ANTHRAQUINONE LF HHB
 1-METHOXY-2-METHYL-ANTHRAQUINONE LF HHB
 3-METHYL-ALIZARIN LF HHB
 3-METHYLPURPURIN PL JSG
 NEODIGITOGENIN PL JSG
 NEODIGTALOXENIN PL JSG
 NEOGITOSTIN 200 SD HHB
 ODOROBIOSE-G 20-50 LF HHB
 ODOROBIOSE-G 50-100 SD HHB
 ODOROBIOSE-H 5 LF HHB
 PELARGONIDIN-3,5-DIGLUCOSIDE LF HHB
 PHOMARIN LF HHB
 PHOMARIN-6-METHYL-ETHER LF HHB
 PURPNIN PL JSG
 PURPRIN LF HHB
 PURPRONIN LF HHB
 PURLANOSIDE-B 20 SD HHB
 PURPUREAGITOSIDE PL JSG
 PURPUREAGLYCOSIDE-A 200-1,200 LF HHB
 PURPUREAGLYCOSIDE-A 30 SD HHB
 PURPUREAGLYCOSIDE-B 200-800 LF HHB
 PURPUREAGLYCOSIDE-B 10 SD HHB
 SAPONINS 10,000 SD HHB
 SITOSTEROL LF WOI
 SPIROSTANOL-GLYCOSIDES 10,000 LF HHB
 STROSPESIDE 50-200 LH HHB
 SUCCINIC-ACID LF WOI
 TIGOGENIN 4,000-7,000 LF HHB
 TIGONIN LF HHB
 TIGONIN 300 SD HHB
 TRIACONTANE LF WOI
 VERODOXIN 50-200 LH HHB

***DIOSCOREA ALATA* L.**

“GREATER YAM; WINGED YAM”

ALUMINUM 1-12 RT B&H
 ASCORBIC-ACID 100 RT B&H
 ASH 7,000-35,045 RT B&H
 BORON 0.8-7 RT B&H JFS51:523
 CALCIUM 44-290 RT B&H JFS51:523
 BETA-CAROTENE 0-0.2 RT B&H
 CITRATES 1,270-5,935 RT B&H
 COPPER 0.5-10.7 RT B&H JFS51:523
 CYANIDIN-3-GENTIOBIOSIDE PL HHB
 CYANIDIN-GLYCOSIDE BU HHB
 FAT 300-5,700 RT B&H
 FERULIC-ACID PL HHB
 FIBER 6,000-55,600 RT B&H
 IRON 1.4-25 RT B&H JFS51:523
 KILOCALORIES 619-3,005 RT B&H
 MAGNESIUM 66-827 RT B&H
 MALATES 870-5,750 RT B&H
 MANGANESE 0.02-0.9 RT B&H
 JFS51:523
 NIACIN 0.7-17 RT B&H
 OXALATE 150-700 RT B&H
 PHOSPHORUS 48-2,190 RT B&H
 JFS51:523
 POTASSIUM 2,240-15,040 RT B&H
 JFS51:523
 PROTEIN 11,000-63,085 RT B&H
 RIBOFLAVIN 0.2-1.1 RT B&H
 SODIUM 22-335 RT B&H JFS51:523
 STARCH 159,000-743,000 RT B&H
 SUCINATES 0 RT B&H
 SUGARS 5,000-35,980 RT B&H
 SULFUR 98-990 RT B&H JFS51:523
 THIAMIN 0.3-1.4 RT B&H
 WATER 650,000-786,000 RT B&H
 ZINC 2-17 RT B&H

***DIOSCOREA BULBIFERA* L.**

“AIR POTATO; POTATO YAM”

ARSENIC 0.37 RH CAL
 ASH 9,000-31,000 TU CRC
 CALCIUM 690-2,379 RH CAL CRC
 CALCIUM-OXALATE TU WOI
 CARBOHYDRATES 265,000-914,900 TU
 CRC WOI
 COPPER 8 RH CAL
 DIOSBULBIN-A TU CCO
 DIOSBULBIN-B TU CCO
 DIOSBULBIN-C TU CCO
 DIOSBULBIN-D TU CCO

DIOSBULBIN-E TU CCO
 DIOSBULBIN-F TU CCO
 DIOSBULBIN-G TU CCO
 DIOSBULBIN-H TU CCO
 DIOSBULBINOSIDE-D TU CCO
 DIOSBULBINOSIDE-F TU CCO
 DIOSGENIN 4,500 TU HHB
 FAT 1,000-12,800 TU CRC WOI
 FIBER 9,000-96,400 TU CRC WOI
 GUM 900 TU HHB
 IRON 40 RH CAL
 KILOCALORIES 1,120-3,860 TU CRC
 MAGNESIUM 370 RH CAL
 MANGANESE 4 RH CAL
 MERCURY 0.02 RH CAL
 PHOSPHORUS 290-1,000 TU CRC
 PHOSPHORUS-OXIDE-P2O5 4,500-7,700
 TU WOI
 POTASSIUM 3,570 RH CAL
 PROTEIN 15,000-133,100 TU CRC WOI
 SAPONIN 57,000 TU HHB
 SODIUM 378 RH CAL
 D-SORBITOL RH CCO
 STARCH 800,000 TU HHB
 TANNIN TU CCO
 2,4,5,6-TETRAHYDROXYPHENAN-
 THRENE TU CCO
 2,4,6,7-TETRAHYDROXY-9,10-
 DIHYDROPHENANTHRENE TU CCO
 WATER 710,000 TU CRC
 ZINC 12 RH CAL

DIOSCOREA COMPOSITA

HEMSL.

“BARBASCO”

DIOSGENIN PL JSG
 SAPOGENINS 40,000-60,000 RT CRC

***DIOSCOREA PENTAPHYLLA* L.**

“MOUNTAIN YAM”

ALANINE 550-2,965 RT USA
 ARGININE 1,120-6,035 RT USA
 ASCORBIC-ACID 26-140 RT USA
 ASH 8,200-44,180 RT USA
 ASPARTIC-ACID 1,360-7,330 RT USA
 CALCIUM 260-1,400 RT USA
 CARBOHYDRATE 163,100-878,770 RT
 USA
 BETA-CAROTENE 0 RT USA
 CYSTINE 160-860 RT USA
 FAT 1,000-5,390 RT USA

FIBER 4,500-24,245 RT USA
 GLUTAMIC-ACID 1,590-8,565 RT USA
 GLYCINE 460-2,480 RT USA
 HISTIDINE 300-1,615 RT USA
 IRON 4-24 RT USA
 ISOLEUCINE 450-2,425 RT USA
 KILOCALORIES 670-3,610 RT USA
 LEUCINE 840-4,525 RT USA
 LINOLEIC-ACID 380-2,050 RT USA
 LINOLENIC-ACID 70-375 RT USA
 LYSINE 520-2,800 RT USA
 MAGNESIUM 94-792 RT USA
 METHIONINE 180-970 RT USA
 MUFA 40-215 RT USA
 NIACIN 4-29 RT USA
 OLEIC-ACID 40-215 RT USA
 PALMITIC-ACID 200-1,080 RT USA
 PHENYLALANINE 620-3,340 RT USA
 PHOSPHORUS 340-1,830 RT USA
 PHYTOSTEROLS 100-333 RT USA
 POTASSIUM 3,555-25,350 RT USA
 PROLINE 480-2,585 RT USA
 PROTEIN 13,400-72,200 RT USA
 PUFA 450-2,425 RT USA
 RIBOFLAVIN 0.2-1 RT USA
 SERINE 710-3,825 RT USA
 SFA 220-1,185 RT USA
 SODIUM 120-750 RT USA
 STEARIC-ACID 20-108 RT USA
 THIAMIN 1-7 RT USA
 THREONINE 470-2,530 RT USA
 TRYPTOPHAN 110-595 RT USA
 TYROSINE 350-1,885 RT USA
 VALINE 540-2,910 RT USA
 WATER 796,950-831,850 RT USA
 USA data based on *D. spp.*, AH-8-11

DIOSCOREA SP

"WILD YAM" (MEDICINAL)

ALUMINUM 210 RT PED 1/
 ASCORBIC-ACID 194 RT PED
 ASH 35,000 RT PED
 CALCIUM 3,060 RT PED
 CARBOHYDRATES 897,000 RT PED
 BETA-CAROTENE 19 RT PED
 CHROMIUM 26 RT PED
 COBALT 147 RT PED
 DIOSCIN RT 411/
 DIOSCORIN RT 411/
 DIOSGENIN RT 411/
 FAT 6,000 RT PED
 FIBER 26,000 RT PED
 IRON 315 RT PED

KILOCALORIES 3,840 RT PED
 MAGNESIUM 1,630 RT PED
 MANGANESE 64 RT PED
 NIACIN 10 RT PED
 PHOSPHORUS 1,730 RT PED
 POTASSIUM 5,420 RT PED
 PROTEIN 61,000 RT PED
 RIBOFLAVIN 0.65 RT PED
 SELENIUM 9.4 RT PED
 SILICON TR RT PED
 SODIUM 36 RT PED
 THIAMIN 3.5 RT PED
 TIN 19 RT PED
 WATER 690,000 RT PED
 ZINC 56 RT PED

1/ PED VALUES OFTEN OUT OF LINE
FOR CULTIVATED FOOD YAMS.

DIOSPYROS VIRGINIANA L.

"AMERICAN PERSIMMON"

ALUMINUM 4-378 ST USG
 ASCORBIC-ACID 660-1,855 FR CRC
 ASH 9,000-25,280 FR CRC
 ASH 22,000-54,000 ST USG
 ASH 50,000 LF USG 2/
 BARIUM 3-1,080 ST USG
 BARIUM 1-910 LF USG
 BENZOTHAZOLE FR JFS56:262
 BORNEOL FR JFS56:262
 BORNYL-ACETATE FR JFS56:262
 BORON 1-38 ST USG
 BORON 4-50 LF USG 2/
 CALCIUM 270-758 FR CRC
 CALCIUM 2,640-17,820 ST USG
 CALCIUM 1,150-12,500 LF USG 2/
 CARBOHYDRATES 335,000-941,000 FR
 CRC
 CHROMIUM 0-2.7 ST USG
 CHROMIUM 0-1 LF USG 2/
 COBALT 0-54 ST USG
 COBALT 0-100 LF USG 2/
 COPPER 0.2 108 ST USG
 COPPER 1-7.5 LF USG 2/
 DELPHINIDIN PL JLS58:152
 FAT 4,000-11,230 FR CRC
 FAT 26,000 SD CRC
 FIBER 15,000-42,135 FR CRC
 GALLIUM 0-0.25 LF USG 2/
 (E)-2-HEXENAL FR JFS56:262
 IRON 25-70 FR CRC
 IRON 3-1,620 ST USG
 IRON 15-500 LF USG 2/

KAEMPFEROL PL JLS58:152
 KILOCALORIES 1,270-3,567 FR CRC
 LANTHANUM 0.7-16.2 ST USG
 LANTHANUM 1.5-15 LF USG 2/
 LEAD 0.2-81 ST USG
 LEAD 0.5-35 LF USG 2/
 MAGNESIUM 660-5,400 ST USG
 MAGNESIUM 1,500-5,000 LF USG 2/
 MANGANESE 22-1,080 ST USG
 MANGANESE 25-1,500 LF USG 2/
 MOLYBDENUM 0-1.08 ST USG
 MOLBDENUM 0-1 LF USG 2/
 MYRICETIN PL JLS58:152
 NEODYMIUM 1.5-37.8 ST USG
 NEODYMIUM 3.5-15 LF USG 2/
 NERYL-ACETATE FR JFS56:262
 NICKEL 0.1-8 ST USG
 NICKEL 0.3-16 LF USG 2/
 PALMITIC-ACID FR JFS56:262
 PHENYLACETALDEHYDE FR JFS56:262
 PHENYLETHYL-ACETATE FR JFS56:262
 PHOSPHORUS 260-730 FR CRC
 PHOSPHORUS 132-2,592 ST USG
 PHOSPHORUS 450-1,500 LF USG 2/
 POTASSIUM 3,100-8,710 FR CRC
 POTASSIUM 1,716-16,200 ST USG 1/
 POTASSIUM 7,500-16,000 LF USG 2/
 PROTEIN 8,000-22,470 FR CRC
 PROTEIN 100,000 SD CRC
 QUERCETIN PL JLS58:152
 SODIUM 10-28 FR CRC
 STRONTIUM 6.6-378 ST USG
 STRONTIUM 7-1,000 LG USG 2/
 TITANIUM 0-162 ST USG
 TITANIUM 0.2-50 LF USG 2/
 VANADIUM 0.11-1.08 ST USG
 VANADIUM 0.25-1.5 LF USG 2/
 WATER 644,000 FR CRC
 YTTERBIUM 0.04-0.38 ST USG
 YTTERBIUM 0.1-1 LF USG
 YTTRIUM 0.1-16.2 ST USG
 YTTRIUM 0.2-15 LF USG
 ZINC 9-162 ST USG
 ZINC 5-25 LF USG 2/
 ZIRCONIUM 0.4-1.6 ST USG 1/
 ZIRCONIUM 1-3.5 LF USG 2/
 1/2/USGS DATA; ASSUMES ASH =10%

DIPTERYX ODORATA (AUBL.)
 WILLD.

“TONKA BEAN”

BETULIN BK CRC
 O-COUMARIC-ACID SD CRC

COUMARIC-ACID-BETA-GLUCOSIDE
 SD CRC
 COUMARIN 10,000-35,000 (-100,000) SD
 CRC
 DIPTERYXIN WD CRC
 FAT 250,000 SD CRC
 3'-HYDROXYRETUSIN-8-METHYL-
 ETHER WD CRC
 LINOLEIC-ACID 3,850 SD CRC HHB
 LUPEOL BK CRC
 METHYL-LINOLEATE BK CRC
 METHYL-LINOLENATE BK CRC
 METHYL-OLEATE BK CRC
 ODORATIN WD CRC
 OLEIC-ACID 14,900 SD CRC HHB
 PALMITIC-ACID 1,525 SD CRC HHB
 RETUSIN WD CRC
 RETUSIN-8-METHYL-ETHER WD CRC
 SITOSTEROLL SD CRC
 STEARIC-ACID 1,425 SD CRC HHB
 STIGMASTEROL SD CRC
 UMBELLIFERONE SD CRC
 WATER 69,000-102,000 SD CRC

DODONAEA VISCOSA (L.) JACQ
 “HOPWOOD”

ALKALOID 200 LF RAA
 21-ANGELOYL-R1-BARRINGENOL ST
 FT58:361
 ALIARIN SH RAA
 ARACHIDIC-ACID 2,850-10,185 SD CRC
 RAA WOI
 BEHENIC-ACID 1,650-4,125 SD CRC
 WOI
 4H-1-BENZOPYRAN-4-ONE SH
 RLQ11:150
 CAFFEIC-ACID PL JLS58:139
 CLEOMISCOSIN ST FT58:361
 CYANIDIN PL JLS58:139
 21,22-DIANGELOYL-
 BARRINGTOGENOL-C ST FT58:361
 21,22-DIANGELOYL-R1-BARRINGENOL
 ST FT58:361
 5,7-DIHYDROXY-3,6-DIMETHOXY-2-
 (4-METHOXYPHENYL)-FLAVONE SH
 RLQ11:150
 DODOGENIN SD WOI
 DODONIC-ACID PL JSG
 DODONIN 30,000 SD WOI
 ERUCIC-ACID <5,470-<13,680 SD CRC
 WOI
 FAT 76,000-190,000 SD CRC
 HAUTRIWAIC-ACID LF W&B

HENTRIACONTANE LF W&B
 5-HYDROXY-3,6,7,4'-
 TETRAMETHOXYFLAVONE SH RAA
 HYPERIN FR CCO
 HYPERIN LF CCO
 ISORHAMNETIN SH RAA
 ISORHAMNETIN-3-O-
 RHAMNOSYLGALACTOSIDE SH RAA
 ISORHAMNETIN-3-O-RUTINOSIDE FR
 CCO
 ISORHAMNETIN-3-O-RUTINOSIDE LF
 CCO
 KAEMPFEROL PL JLS58:139
 KAEMPFEROL-3,7-DIMETHYLETHER
 FL RAA
 KAEMPFEROL-3',4',7-TRIMETHYLETHER
 FL RAA
 LINOLEIC-ACID 22,670-108,470 SD CRC
 RAA WOI
 LINOLENIC-ACID 1,190-2,980 SD CRC
 RAA
 OLEIC-ACID 12,500-45,315 SD CRC RAA
 WOI
 PALMITIC-ACID 8,580-24,900 SD CRC
 WOI
 PENDULETIN SH RAA
 PHYTOSTEROLS LF W&B
 PINOCEMBRIN SH RAA
 PROTEIN 204,000-214,000 SD CRC
 QUERCETIN PL JLS58:139
 QUERCETIN-3-O-GALACTOSIDE LF
 RAA
 QUERCETIN-3-O-RUTINOSIDE LF
 RAA
 QUERCETOL FL RAA
 QUERCETOL-3-ARABINOSIDE? FL
 RAA
 RESIN 66,400 LF WOI
 RUTIN FR CCO
 RUTIN LF CCO
 SANTIN SH RAA
 SAPONIN SD JFM
 BETA-SITOSTEROL SD WOI
 STEARIC-ACID 7,490-31,400 SD CRC
 RAA WOI
 STIGMAST-5-EN-3-OL SH RLQ11:150
 STIGMASTEROL ST FT58:361
 TANNIN 58,000 BK WOI
 TANNIN 59,800 LF WOI
 5,7,4'-TRIHYDROXY-3,6-
 DIMETHOXYFLAVONE SH RAA
 3,6,4'-TRIMETHOXY-5,7-
 DIHYDROXYFLAVONE SH RAA

DRIMYS WINTERI FORSTER &
FORSTER F.

“WINTER’S BARK”

L-3-BETA-ACETOXYDRIMENIN LF
 PC25:253
 CARYOPHYLLENE BK HHB
 CELLULOSE 353,000-366,000 WD
 ABS
 CINEOLE BK HHB
 CONFERTIFOLIN BK HHB
 CRYPTOMERIDOL PL JFM
 DIHYDROQUERCETIN LF HHB
 DRIMINE BK HHB
 DRIMENOL PL PT52:33
 DRIMOL LF HHB
 EO 10,000 BK HHB
 EUGENOL BK HHB
 FUEGINE BK HHB
 FURTONOLIDE BK HHB
 HEMICELLULOSE 353,000-366,000 WD
 ABS
 ISOTADEONAL FT52:33
 KAEMPFEROL LF HHB
 LIGNIN 277,000-279,000 WD ABS
 MANNITOL BK HHB
 L-PINENE BK HHB
 QUERCETIN LF HHB
 RHAMNOSE PL JFM
 TADEONOL FT52:33
 TANNIC-ACID PL JFM
 VALDIVIOLIDE BK HHB
 WINTERIN BK HHB

DRYNARIA FORTUNEI (KUNZE)

J. SMITH

“FORTUNE’S FERN”

ARSENIC 0.06 RH CAL
 CALCIUM 16,000 RH CAL
 COPPER 10 RH CAL
 GLUCOSE RH CCO
 IRON 50 RH CAL
 MAGNESIUM 4,140 RH CAL
 MANGANESE 39 RH CAL
 MERCURY 0.06 RH CAL
 NARINGIN RH CCO
 POTASSIUM 16,900 RH CAL
 SODIUM 68 RH CAL
 STARCH RH CCO
 ZINC 17 RH CAL

DRYOPTERIS FILIX-MAS (L.)
SCHOTT

“MALE FERN”

ALBASPIDIN RH HHB
 ASPIDIN RH HHB
 ASPIDINOL RH HHB
 BUTANONEPHLOROGLUCIDES RH
 HHB
 BUTYRIC-ACID RH HHB
 DESASPIDIN RH HHB
 EO 80-400 RH HHB
 FAT 50,000-60,000 RH HHB
 9(11)-FERNENE RH 411/
 FILICIC-ACID RH HHB
 FILICIN 15,000 RH WO
 FILICYLBUTANONE RH 411/
 FILMARONE PL WO
 FLAVASPIDIC-ACID RH HHB
 GLUCOSE RH HHB
 HEXANOL RH HHB
 11,13(13)-HOPADIENE RH 411/
 12-HOPENE RH 411/
 ISOBUTYRIC-ACID RH HHB
 MARGASPIDIN RH HHB
 METHYLENE-BIS-NORFLAVASPIDIC-
 ACID RH HHB
 OCTANOL RH HHB
 PARASPIDIN RH 411/
 PHLOBAPHENE RH HHB
 PHLORASPIDINOL RH HHB
 PHLORASPIN RH HHB
 PHLORASPYRONE RH HHB
 PHLOROGLUCIN RH HHB
 PHLOROPYRON RH HHB
 PROTOCATECHUIC-ACID RH HHB
 PSEUDOASPIDIN RH HHB
 SUGAR 110,000 RH HHB
 TANNINS 78,000 RH HHB
 TRISASPIDIN RH HHB
 TRISDESASPIDIN RH HHB
 TRISFLAVASPIDIC-ACID RH HHB

DUBOISIA MYOPOROIDES R. BR.

“CORKWOOD TREE”

“PITURI”

ACETYLTROPINE LF HHB
 ALKALOIDS 20,000 LF HHB
 L-ANABASINE LF HHB
 APOHYOSCINE LF HHB
 BUTROPINE LH HHB

HYOSCINE SP ALK
 HYOSCYAMINE LF HHB
 DL-ISOPelletierine LF HHB
 ISOPOROIDINE LF HHB
 NICOTINE LF HHB
 NORNICOTINE LF HHB
 NORHYOSCYAMINE LF HHB
 POROIDINE LF HHB
 SCOPOLAMINE LF HHB
 TETRAMETHYLPutrescine RT HHB
 TIGLOIDINE LF HHB
 TIGLOYLTROPINE LF HHB
 VALERODININE LF HHB
 VALEROIDINE RT HHB
 VALTROPINE LF HHB

DURANTA REPENS L.

“GOLDEN DEWDROP”

FAT 14,000 SD CRC
 HCN LF FR CRC
 PROTEIN 131,000 SD CRC

ECHINACEA SPP

“CONEFLOWER; ECHINACEA”

ALKYLAMIDES 40-1,510 RT EMP5:253
 ALUMINUM 786-12,900 RT PED
 EMP5:253
 APIGENIN LF EMP5:253
 ARABINOGALACTAN RT PED
 ASCORBIC-ACID 2,140 LF EMP5:253
 ASCORBIC-ACID 843 RT PED
 ASH 80,000 RT PED
 BEHENIC-ACID-ETHYL-ESTER RT
 EMP5:253
 BETAINE RT EMP5:253
 BORNEOL PL EMP5:523
 BORNYL-ACETATE PL EMP5:523
 CAFFEIC-ACID PL LJS58:162
 2-O-CAFFEYOYL-3-(5-(ALPHA-CARBOXY-
 BETA-(3,4,-DIHYDROXYPHENYL...
 2-O-CAFFEYOYL-3-O-
 CUMAROYLTARTARIC-ACID SH
 EMP5:253
 6-O-CAFFEYOYLECHINACOSIDE RT
 EMP5:253
 2-O-CAFFEYOYL-3-O-
 FERULOYLTARTARIC-ACID LF
 EMP5:253
 2-O-CAFFEYOYLTARTARIC-ACID LF
 EMP5:253
 CALCIUM 3,290-7,760 RT PED EMP5:253

- CARBONATE 7,100 RT EMP5:253
 BETA-CAROTENE 2.2 RT PED
 CARYOPHYLLENE 42 RT EMP5:253
 CARYOPHYLLENE-EPOXIDE 26 RT EMP5:253
 CHLORIDE 760 RT EMP5:253
 CHLOROGENIC-ACID SH EMP5:253
 CHROMIUM 19 RT PED
 CICHORIC-ACID 12,000-31,000 FL EMP5:253
 CICHORIC-ACID 6,000-21,000 RT EMP5:253
 CICHORIC-ACID-METHYL-ESTER 6,000-21,000 RT EMP5:253
 COBALT 148 RT PED
 CYANADIN-3-O-(BETA-D-GLYCOPYRANOSIDE) FL EMP5:253
 CYANADIN-3-O-(6-O-MALONYL-BETA-D-GLYCOPYRANOSIDE) FL EMP5:253
 CYNARIN RT EMP5:253
 DECA-(2E,4E,6E)-TRIENOIC-ACID-ISOBUTYLAMIDE RT EMP5:253
 DES-RHAMNOSYLVERBASCOSIDE RT EMP5:253
 3,5-DICAFFEOYLQUINIC-ACID PL EMP5:253
 4,5-O-DICAFFEOYLQUINIC-ACID PL EMP5:253
 2,3-O-DIFERULOYLTARTARIC-ACID LF EMP5:253
 DODECA-(2E,4E)-DIENOIC-ACID-ISOBUTYLAMIDE RT EMP5:253
 DODECA-2,4-DIEN-1-YL-ISOVALERATE RT EMP5:253
 DODECA-(2E,6Z,8E,10E)-TETRAENOIC-ACID-ISOBUTYLAMIDE RT EMP5:253
 ECHINACEIN 10-100 RT EMP5:253
 ECHINACIN RT 411/
 ECHINACOSIDE 3,000-17,000 RT EMP5:253
 ECHINOLONE RT EMP5:253
 EO 600-6,000 FL EMP5:253
 EO 100-6,000 LF EMP5:253
 EO 50-40,000 RT PED EMP5:253
 EPISHIOBUNOL FR EMP5:253
 BETA-FARNESENE FR EMP5:253
 FAT 13,000 RT PED
 FERULIC-ACID PL LJS58:162
 2-O-FERULOYLTARTARIC-ACID LF EMP5:253
 FIBER 111,000 RT PED
 FLAVANOIDS 3,800-4,800 LF EMP5:253
 GERMACRENE-ALCOHOL RT EMP5:523
 GERMACRENE-D RT EMP5:523
 HEPTADECA-(8Z,11Z)-DIEN-2-ONE RT EMP5:253
 HETEROXYLAN 800 RT EMP5:253RT PED
 HUMULENE 8-12 RT EMP5:253
 (E)-10-HYDROXY-4,10-DIMETHYL-4,11-DODECADIEN-2-ONE PL EMP5:253
 13-HYDROXYOCTADECA-(9Z,11E,15Z)-TRIENOIC-ACID SH EMP5:253
 INULIN 59,000-200,000 RT PED EMP5:253
 IRON 700-4,800 RT PED EMP5:253
 ISOCHLOROGENIC-ACID SH EMP5:253
 ISORHAMNETIN-3-RUTINOSIDE LF EMP5:253
 ISOTUSSILAGINE 15 PL 411/EMP5:253
 KAEMPFEROL LF EMP5:253
 KAEMPFEROL-3-GLUCOSIDE LF EMP5:253
 KAEMPFEROL-3-RUTINOSIDE LF EMP5:253
 KILOCALORIES 2,800 RT PED
 LIMONENE FR EMP5:253
 LUTEOLIN LF EMP5:253
 LUTEOLIN-7-GLUCOSIDE LF EMP5:253
 MAGNESIUM 1,170-1,860 RT PED EMP5:253
 MANGANESE 101 RT PED
 2-METHYLTETRADECA-5,12-DIENE PL EMP5:253
 2-METHYLTETRADECA-6,12-DIENE PL EMP5:253
 METHYL-P-HYDROXYCINNAMATE EO 411/
 MYRCENE FR EMP5:253
 NIACIN 68 RT PED
 PALMITIC-ACID RT EMP5:253
 PENTADECA-(8Z,11Z)-DIEN-2-ONE RT EMP5:253
 PENTADECA-(8Z,13Z)-DIEN-11-YN-2-ONE RT EMP5:253
 PENTADECA-8-EN-2-ONE RT EMP5:253
 PENTADECA-(8Z)-EN-2-ONE 4,000 RT EMP5:253
 PENTADECA-(8Z)-EN-11,13-DIYN-2-ONE RT EMP5:253
 L-PENTADECENE 400 RT EMP5:253
 PENTA-(1,8Z)-DIENE 400 RT EMP5:253
 PHOSPHORUS 790 RT PED
 ALPHA-PINENE FR EMP5:253
 BETA-PINENE FR EMP5:253
 POLYACETYLENES 20 RT EMP5:253

POLYSACCHARIDES RT PED
 PONTICAPOXIDE RT HHB
 POTASSIUM 3,140-8,090 RT PED
 EMP5:253
 PROTEIN 92,000 RT PED
 QUERCETAGETIN-7-GLUCOSIDE LF
 EMP5:253
 QUERCETIN LF EMP5:253
 QUERCETIN-3-GALACTOSIDE LF
 EMP5:253
 QUERCETIN-3-GLUCOSIDE LF
 EMP5:253
 QUERCETIN-3-ROBINOSIDE LF
 EMP5:253
 QUERCETIN-3-XYLOSIDE LF EMP5:253
 QUERCETIN-3-XYLOSYL GALACTOSIDE
 LF EMP5:253
 RHAMNOARABINOGALACTAN RT PED
 RIBOFLAVIN 12 BK PED
 RUTIN LF EMP5:253
 RUTOSIDE LF EMP5:253
 SELENIUM 21 RT PED
 SILICATE 15,340 RT EMP5:253
 SILICON 301 RT PED
 BETA-SITOSTEROL SH EMP5:253
 SITOSTEROL-3-BETA-O-GLUCOSIDE SH
 EMP5:253
 SODIUM 90 RT PED
 STIGMASTEROL SH EMP5:253
 SULFATE 2,450 RT EMP5:253
 (+)-TARTARIC-ACID PL EMP5:253
 TETRADECA-(8Z)-EN-11,13-DIYN-2-ONE
 RT EMP5:253
 THIAMIN 2.6 RT PED
 TIN 17 RT PED
 N-TRIACONTANOL SH EMP5:253
 TRIDECA-1-EN-3,5,7,9,10-PENTAYNE RT
 EMP5:253
 TUSSILAGINE 15-60 RT EMP5:253 411/
 VANILLIN PL 411/
 VERBASCOSIDE RT EMP5:253
 WATER 749,000 RT PED
 ZINC 51 RT PED

This is rather a generic approach; for the
 species and their chemicals, see EMP5:253

ELETTARIA CARDAMOMUM (L.) MATON

“CARDAMOM”

ASH 54,000 FR CRC
 ASH 58,000 SD CRC

BISABOLENE SD JAF38:2133
 BORNEOL 32-8,000 FR
 BORON 1-14 SD BOB
 CALCIUM 1,300-1,625 FR CRC
 CALCIUM 3,830-4,177 SD CRC
 CAMPESTEROL SD JAF38:2133
 CAMPHENE 10-30 FR
 CAMPHOR 7-20 FR
 CARBOHYDRATES 421,000-778,000 FR
 CRC
 CARBOHYDRATES 685,000-747,000 SD
 CRC
 CARDIOLIPIN SD JAF38:2133
 DELTA-5,7,22-CHOLESTATRIENOL SD
 JAF38:2133
 CHOLESTEROL SD JAF38:2133
 CHROMIUM 20.5-29.5 FR ABS 5/
 1,8-CINEOLE 525-56,000 FR
 CITRONELLAL
 CITRONELLOL 14-40 FR
 COBALT 0.4-0.8 FR ABS 5/
 ALPHA-COPAENE SD JAF38:2133
 COPPER 3.8-15.4 FR ABS USA
 P-CYMENE 130-28,000 FR
 DESMOSTEROL SD JAF38:2133
 EO 25,000-100,000 FR
 7-ERGOSTEROL SD JAF38:2133
 EUGENYL-ACETATE SD JAF38:2133
 FAT 67,000-100,000 SD CRC HHB
 FAT 22,000-28,000 FR CRC
 FIBER 201,000-251,000 FR CRC
 FIBER 113,000-123,000 SD CRC
 GERANIOL 49-140
 GERANYL-ACETATE 525-1,500 FR
 N-HENTRIACTANE SD JAF38:2133
 N-HENTRIACONTENE SD JAF38:2133
 N-HEPTACOSANE SD JAF38:2133
 N-HEPTACOSENE SD JAF38:2133
 IRON 42-66 FR CRC ABS 5/
 IRON 140-153 SD CRC
 LIMONENE 595-9,481 FR
 LINALOOL 1,288-8,000 FR
 LINALYL-ACETATE 1,197-8,000
 LINOLEIC-ACID 7,035-10,500 SD
 HHB
 LYSOPHOSPHATIDYLCHOLINE SD
 JAF38:2133
 MANGANESE 66-280 FR ABS USA
 CIS-P-MENTH-2-EN-1-OL 525-1,500 FR
 METHYL-HEPTENONE 18-51
 MYRCENE 336-3,000 FR
 NEROL 10-30 FR
 NEROLIDOL 448-1,280 FR

NERYL-ACETATE FR
 NIACIN 11-12 SD CRC
 N-NONACOSANE SD JAF38:2133
 N-NONACOSENE SD JAF38:213312
 OLEIC-ACID 41,942-62,600 SD HHB
 PALMITIC-ACID 5,828-8,400 SD HHB
 N-PENTACOSANE SD JAF38:2133
 N-PENTACOSENE SD JAF38:2133
 ALPHA-PHELLANDRENE FR
 PHOSPHATIDYLETHANOLAMINE SD
 JAF38:2133
 PHOSPHATIDYLINOSITOL SD
 JAF38:2133
 ALPHA-PINENE 217-3,000 FR
 BETA-PINENE 70-1,094 FR
 PHOSPHORUS 1,600-2,000 FR CRC
 PHOSPHORUS 1,780-1,941 SD CRC
 PHYTOL SD JAF38:2133
 POTASSIUM 11,790-12,857 SD CRC
 PROTEIN 102,000-128,000 FR CRC
 PROTEIN 108,000-118,000 SD CRC
 RIBOFLAVIN 1-2 SD CRC
 SABINENE 500-1,425 FR
 TRANS-SABINENE-HYDRATE 875-2,500
 FR
 BETA-SITOSTENONE SD JAF38:2133
 BETA-SITOSTEROL SD JAF38:2133
 SODIUM 180-196 SD CRC
 STARCH 200,000-400,000 SD HHB
 STEARIC-ACID 12,261-18,300 SD HHB
 STIGMASTEROL SD JAF38:2133
 SUGAR 50,000 SD HHB
 ALPHA-TERPINENE 21-60 FR
 GAMMA-TERPINENE 49-140 FR
 TERPINEN-4-OL 252-23,200 FR
 ALPHA-TERPINEOL 301-4,300 FR
 ALPHA-TERPINYL-ACETATE 1,050-
 50,000 FR
 D-ALPHA-TERPINYL-ACETATE FR
 CCO
 D-PHI-TERPINYL-ACETATE SD CCO
 THIAMIN 1-2 SD CRC
 ALPHA-THUJENE 1,330-3,047
 ALPHA-TOCOPHEROL SD JAF38:2133
 GAMMA-TOCOPHEROL SD JAF38:2133
 N-TRICOSANE SD JAF38:2133
 N-TRICOSENE SD JAF38:2133
 N-TRITRIACONTANE SD JAF38:2133
 N-TRITRIACONTENE SD JAF38:2133
 ALPHA-YLANGENE SD JAF38:2133
 ZINC 23-28 FR ABS 5/

5/ Abs=Khan, Bibi & Zia. 1985.

ELEUTHEROCOCCUS
SENTICOSUS (RUPR. & MAXIM.)
MAXIM.

"WU JIA; SIBERIAN GINSENG;
 ELEUTHERO GINSENG;
 SPINY GINSENG"

CAFFEIC-ACID RT 1/
 CAFFEIC-ACID-ETHYL-ESTER RT 1/
 BETA-CAROTENE RT 1/
 CONIFERYL-ALDEHYDE RT 1/
 COPPER RT 1/
 COUMARIN-X RT 1/
 DAUCOSTERIN RT BK ST BK CRC
 ELEUTHEROCOCCAL
 ELEUTHEROSIDE-A 1,000 RT 1/
 ELEUTHEROSIDE-B 5,000 RT 1/
 ELEUTHEROSIDE-B-1 1 RT 1/
 ELEUTHEROSIDE-B-2 1 RT 1/
 ELEUTHEROSIDE-B-4 230 RT 1
 ELEUTHEROSIDE-C 4,000 RT
 ELEUTHEROSIDE-D 800 RT 1/
 ELEUTHEROSIDE-E 1,000 RT 1/
 ELEUTHEROSIDE-F 500 RT 1/
 ELEUTHEROSIDE-G 250 RT 1/
 ELEUTHEROSIDE-I PL 1/
 ELEUTHEROSIDE-K PL 1/
 ELEUTHEROSIDE-L PL 1/
 ELEUTHEROSIDE-M
 EO 8,000 RT CRC
 EO 5,000 FR CRC
 EO 3,100 LF CRC
 EO 2,600 ST CRC
 D-GALACTOSE RT ABS
 D-GLUCOSE RT ABS
 GLYCANS (ELEUTHERANS) RT ABS
 ISOFRAXIDIN RT
 ALPHA-MALTOSE RT 1/
 BETA-MALTOSE RT 1/
 OLEANOLIC-ACID RT 1/
 PECTIN RT CRC
 POLYSACCHARIDE-PES-A RT 1/
 POLYSACCHARIDE-PES-B RT 1/
 RESIN RT CRC
 SAPONINS
 SENTICOSIDE-A LF 1/
 SENTICOSIDE-B LF 1/
 SENTICOSIDE-C LF 1/
 SENTICOSIDE-D LF 1/
 SENTICOSIDE-E LF 1/
 SENTICOSIDE-F LF 1/
 SESAMIN RT CRC 1/

SINAPYLALCOHOL RT 1/
 BETA-SITOSTEROL RT 1/
 SUCROSE RT 1/
 SYRINGARESINOL-DIGLUCOSIDE RT
 CRC
 SYRINGIN ANTISTRESS RT ABS
 VIT-E RT 1/
 WAX RT CRC

1/ Farnsworth et al. 1985. Siberian Ginseng
 (Eleutherococcus senticosus): Econ. &
 Med. Pl. Res. Vol. 1: 155-215.

ELYTRIGIA REPENS (L.) NEVSKI

“QUACKGRASS; DOGGRASS;
 COUCHGRASS”
 AGROPYRENE 494 RH HHB
 BETA-ALANINE RH HHB
 ALUMINUM 331 PL PED
 ASH 61,000-78,000 PL CRC PED
 CALCIUM 3,000-9,280 PL CRC PED
 CARBOHYDRATES 772,000-797,000 PL
 CRC
 CHROMIUM 37 PL PED
 COBALT 18 PL PED
 EO 500-520 RH HHB 411/
 FAT 15,000 RH HHB
 FAT 18,000-121,000 SD CRC
 FAT 28,000-38,000 PL CRC
 FIBER 317,000-339,000 PL CRC
 INFUSION SEDATIVE AYL
 INOSITOL 10,000-15,000 RH HHB
 IRON 311 PL PED
 MAGNESIUM 7,570 PL PED
 MALIC-ACID RH HHB
 MANGANESE 188 PL PED
 MANNITOL 10,000-15,000 RH HHB
 MUCILAGE 110,000 RH HHB
 PHOSPHORUS 2,800-9,510 PL CRC PED
 POTASSIUM 9,780 PL PED
 PROTEIN 168,000-212,000 SD CRC
 PED
 PROTEIN 106,000-112,000 PL CRC
 SAPONIN RH HHB
 SELENIUM 102 PL PED
 SILICON 253 PL PED
 SODIUM TR PL PED
 TTN 67 PL PED
 TRITICIN 50,000-80,000 RH HHB WOI
 411/
 VANILLIN RH WOI
 VANILLIN-GLYCOSIDE RH WOI

WATER 789,000 PL PED
 ZINC TR PL PED

EPHEDRA GERARDIANA WALL.

“PAKISTANI EPHEDRA”

ALKALOIDS 8,000-14,000 PL CRC
 CATECHINS PL CRC
 ELLAGIC-ACID PL CRC
 EPHEDRINE 4,000-7,000 PL CRC
 GALLIC-ACID PL CRC
 L-N-METHYLEPHEDRINE PL CRC
 D-N-METHYLPSEUDOEPHEDRINE PL
 CRC
 10-NONACOSANOL LF CCO
 L-NOREPHEDRINE PL CRC
 N-NORPSEUDOEPHEDRINE PL CRC
 D-PSEUDOEPHEDRINE PL CRC
 SAPONINS PL CRC
 TANNINS PL CRC
 TERPINEOL EO CRC
 N-1-TRIACONTANOL LF CCO

EPHEDRA NEVADENSIS S.
 WATS.

“MORMON TEA”

CALCIUM 58,100 PL CRC
 EPHEDRINE? PL CRC
 (+)-NEOPSEUDOEPHEDRINE? PL CRC
 PHOSPHORUS 5,000 PL CRC
 PROTEIN 50,000 PL CRC
 RESIN PL CRC
 TANNIN PL CRC

EPHEDRA SINICA STAPF

“MA HUANG”

ALKALOIDS 8,000-33,000 PL PED 1/
 HHB
 ALUMINUM 63 PL PED
 ASCORBIC-ACID 721 PL PED
 ASH 56,000 PL PED
 CALCIUM 4,390 PL PED
 CARBOHYDRATES 817,000 PL PED
 BETA-CAROTENE 37.3 PL PED
 CHROMIUM TR PL PED
 COBALT 40 PL PED
 ELLAGIC-ACID PL HHB
 EO 1,000-4,000 PL PED
 EPHEDRADINE-A RT CCO
 EPHEDRADINE-B RT CCO

EPHEDRADINE-C RT CCO
 EPHEDRINE 2,400-22,500 PL PED
 L-EPHEDRINE ST CCO
 EPHEOXANE PL CCO
 FAT 19,000 PL PED
 FERULOYLHISTAMINE RT CCO
 FIBER 98,000 PL PED
 GALLIC-ACID PL HHB
 IRON 210 PL PED
 KILOCALORIES 3,100 PL PED
 MAGNESIUM 2,110 PL PED
 MANGANESE 54 PL PED
 MAOKONINE RT CCO
 L-N-METHYLEPHEDRINE PL HHB
 D-N-METHYLPSEUDOEPHEDRINE PL
 HHB
 NIACIN 90 PL PED
 NONACOSAN-10-OL PL CCO
 NONACOSANE PL CCO
 L-NOREPHEDRINE PL HHB
 D-NORPSEUDOEPHEDRINE PL HHB
 PHOSPHORUS PED
 POTASSIUM 13,200 PL PED
 PROTEIN 108,000 PL PED
 D-PSEUDOEPHEDRINE 400-5,000
 (-152,000) ST (CCO) PED
 RIBOFLAVIN 11 PL PED
 SELENIUM 12 PL PED
 SILICON 31 PL PED
 SODIUM 430 PL PED
 L-ALPHA-TERPINEOL PL HHB
 THIAMIN 47 PL PED
 TIN 11 PL PED
 TROCOSAN-1-OL PL CCO
 WATER 790,000 PL PED
 ZINC 21 PL PED

EPHEDRA SPP

"MA-HUANG"

ALKALOIDS 3,000-15,000 PL CCO
 CALCIUM 11,500 PL SMO
 COPPER 2 PL SMO
 EPHEDRADINE-A PL CCO
 EPHEDRADINE-B PL CCO
 EPHEDRADINE-C PL CCO
 L-EPHEDRINE PL CCO
 EPHEOXANE PL CCO
 IRON 600 PL SMO
 MAGNESIUM 4,780 PL SMO
 MANGANESE 37 PL SMO
 L-N-METHYL-EPHEDRINE PL CCO
 D-N-METHYL-PSEUDOEPHEDRINE PL
 CCO

NONACOSAN-10-OL PL CCO
 NONACOSANE PL CCO
 L-NOREPHEDRINE PL CCO
 D-NORPSEUDOEPHEDRINE PL CCO
 POTASSIUM 13,300 PL SMO
 D-PSEUDOEPHEDRINE PL CCO
 SODIUM 96 PL SMO
 1-ALPHA-TERPINEOL PL CCO
 TRICOSAN-1-OL PL CCO
 ZINC 8 PL SMO

EQUISETUM ARVENSE L.

"FIELD HORSETAIL"

ACONITIC-ACID PL WOI
 ALUMINUM 378 PL PED
 ARTICULATIN PL PED
 ASCORBIC-ACID 208-7,937 PL CRC PED
 WOI
 ASH 7,000-242,000 PL CRC PED WOI
 PMP25:32
 CAFFEIC-ACID <8,000 PL PMP25:35
 CALCIUM 580-24,000 PL CRC PED
 PMP25:32
 CAMPESTEROL PL 411/
 CARBOHYDRATES 44,000-737,000 PL
 CRC PED
 BETA-CAROTENE 3-50 PL CRC PED
 CHOLESTEROL PL 411/
 CHROMIUM 22 PL PED
 COBALT 53 PL PED
 P-COUMARIC-ACID PL JSG
 DIHYDROKAEMPFEROL PL JSG
 DIHYDROQUERCETIN PL JSG
 DIMETHYL-SULFONE PL WOI
 DELTA-5,8,11,14-EICOSATETRAENIC-
 ACID PL HHB
 DELTA-8,11,14-EICOSATRIENIC-ACID
 PL HHB
 EQUISETINE PL PED
 EQUISETONIN 50,000 PL CRC PED
 EQUISETRIN PL PED
 EQUISETROSIDE PL CCO
 FAT 2,000-32,000 PL CRC PED
 FERULIC-ACID PL JSG
 FIBER 71,000-235,000 PL CRC PED
 FLAVONOIDS 2,700-5,100 PL PMP25:32
 GALLIC-ACID PL JSG
 GALUTEOLIN PL PED
 GOSSYPITRIN PL PED
 HERBACETRIN PL PED
 DELTA-7,10,13-HEXADECATRIENIC-
 ACID PL HHB
 P-HYDROXYBENZOIC-ACID PL JSG

IRON 698-1,230 PL CRC PED
 ISOFUCOSTEROL PL 411/
 ISOQUERCITRIN PL PED
 ISOQUERCITROSIDE 600-2,000 PL
 PMP25:32
 KAEMPFEROL PL PED
 KAEMPFEROL-7-DIGLUCOSIDE PL CCO
 KILOCALORIES 200-3,170 PL CRC PED
 LUTEOLIN PL PED
 LUTEOLIN-5-GLUCOSIDE PL CCO
 MAGNESIUM 4,370 PL PED
 MALIC-ACID PL HHB
 MANGANESE 69 PL PED
 3-METHOXY-PYRIDINE PL WOI
 NARINGENIN PL JSG
 NICOTINE 0.4 PL VET
 NIACIN 42-889 PL CRC PED
 DELTA-9,12,15-OCTADECATRIENIC-
 ACID PL HHB
 OXALIC-ACID PL CRC
 PALUSTRINE PL PED
 PALUSTRININE PL PED
 PHENOLIC-ACIDS 5,000-8,000 PL
 PMP25:32
 PHOSPHORUS 930-14,762 PL CRC PED
 POTASSIUM 13,000-18,000 PL PED
 PMP25:32
 POTASium-CHLORIDE 15,000 PL HHB
 PROTEIN 10,000-114,000 PL CRC PED
 RHODOXANTHIN PL CCO
 RIBOFLAVIN 0.7-1.9 PL CRC PED
 SELENIUM 13 PL PED
 SILICA 60,000-97,000 PL PMP25:32
 SILICIC-ACID 50,000-80,000 PL CRC
 SILICON 386 PL PED
 BETA-SITOSTEROL PL PED
 SODIUM 560 PL PED
 TANNIC-ACID PL CRC
 THIAMIN 0 PL PED
 THIAMINASE PL 411/
 THYMINE PL WOI
 TIN 14 PL PED
 VANILLIC-ACID PL JSG
 WATER 786,000-937,000 PL CRC PED
 ZINC TR PL PED

1/PED=Pedersen, M. 1987.

EQUISETUM HYEMALE L.

“HORSETAIL; SCOURING RUSH”

ACONITIC-ACID PL CCO
 ARSENIC 0.12 RT PL CAL
 CAFFEIC-ACID PL HHB

CALCIUM 15,500 PL CAL
 COPPER 4 PL CAL
 DIMETHYLSULFON PL CCO
 FERULIC-ACID PL HHB
 GOSSYPETIN-3-BETA-D-
 ...GLUCOPYRANOSIDE PL CCO
 HERBACETIN-3-BETA-D-
 ...GLUCOPYRANOSIDE PL CCO
 IRON 140 PL CAL
 MAGNESIUM 1,010 PL CAL
 MANGANESE 12 PL CAL
 MERCURY 0.08 PL CAL
 POTASSIUM 14,900 PL CAL
 SILICON-DIOXIDE PL CCO
 SODIUM 85 PL CAL
 ZINC 10 PL CAL

ERIOBOTRYA JAPONICA LINDL.

“LOQUAT”

AMYGDALIN LF CCO
 AMYGDALIN 14,000 SD CCO
 ARACHIDIC-ACID SD WOI
 ARSENIC 0.28 LF CAL
 ASCORBIC-ACID 10-840 FR CRC
 ASCORBIC-ACID-OXIDASE LF WOI
 ASH 4,000-44,000 FR CRC
 BENZALDEHYDE LF CCO
 CAFFEIC-ACID PL JLS58:129
 CALCIUM 180-2,381 FR CRC
 CALCIUM 21,900 LF CAL
 CARBOHYDRATES 102,000-919,000 FR
 CRC
 BETA-CAROTENE 2.6-68 FR CRC
 CERYL-ALCOHOL 200 SD HHB
 CERYL-PALMITATE 600 SD HHB
 CITRIC-ACID LF CCO
 COPPER 7 LF CAL
 CRYPTOXANTHIN FR HHB
 CYANIDIN PL JLS58:129
 FAT 2,000-50,000 FR CRC
 FAT 350,000-450,000 SD HHB
 FIBER 5,000-71,000 FR CRC
 FIBER 42,900 SD WOI
 IRON 20-67 FR CRC
 IRON 200 LF CAL
 KAEMPFEROL PL JLS58:129
 KILOCALORIES 400-3,700 FR CRC
 DL-LACTIC-ACID FR HHB
 LEUCOPELARGONIDIN-3-O-
 ALPHA-L-RHAMNO-BETA-D-
 GLUCOPYRENOSIDE
 LEVULOSE FR WOI
 LINOLEIC-ACID SD WOI

MAGNESIUM 2,480 LF CAL
MALIC-ACID LF CCO
MANGANESE 224 LF CAL
MERCURY 0.02 LF CAL
NEO-BETA-CAROTENE FR HHB
NEO-BETA-CAROTENE-B FR HHB
NEO-BETA-CAROTENE-U FR HHB
NIACIN 2-25 FR CRC
NITROGEN 26,000 SD WOI
OLEANOLIC-ACID LF CCO
OLEIC-ACID SD WOI
PALMITIC-ACID SD WOI
PENTOSANS 46,000 SD WOI
PHOSPHORUS 140-2,667 FR CRC
POTASSIUM 2,600-27,632 FR CRC
POTASSIUM 15,500 LF CAL
PROTEIN 2,000-56,000 FR CRC
QUERCETIN PL JLS58:129
RIBOFLAVIN 0.4-4.2 FR CRC
SODIUM 40-351 FR CRC
SODIUM 63 LF CAL
D-SORBITOL 2,000 LF WOI
SUCCINIC-ACID FR WOI
SUCROSE FR WOI
TANNIN LF CCO
D-(+)-TARTARIC-ACID FR HHB
THIAMIN 0.2-1.8 FR CRC
URSOLIC-ACID LF CCO
WATER 865,000-886,000 FR CRC
ZINC 28 LF CAL

ERIOCAULON SP

“ORIENTAL PIPEWORT”

ARSENIC 0.02 LF CAL
CALCIUM 2,070 LF CAL
COPPER 9 LF CAL
IRON 70 LF CAL
MAGNESIUM 670 LF CAL
MANGANESE 96 LF CAL
POTASSIUM 6,050 LF CAL
SODIUM 940 LF CAL
ZINC 21 LF CAL

ERIODICTYON CALIFORNICUM

(HOOK. & ARN.) TORR.

“YERBA SANTA”

ACETIC-ACID PL AYL
BUTYRIC-ACID PL HHB
CEROTIC-ACID RE AYL
CHRYSOERIODICTYOL RE AYL
ERIODICTYOL 2,300-6,000 LF AYL
ERIODICTYONIC-ACID LF AYL

ERIODICTYONINE 30,000-60,000 LF
AYL
ERIDONOL RE AYL
FORMIC-ACID PL HHB
HOMOERIODICTYOL LF 411/
PENTATRIACONTANE RE AYL
PHYTOSTEROLS PL HHB
TANNIN PL AYL
3',4',5',7-TETRAHYDROXYFLAVONE PL
JSG
TRIACONTANE RE AYL
XANTHOERIODICTYOL RE AYL

ERYNGIUM FLORIDANUM L.

“FLORIDA ERYNGIUM”

ASCORBIC-ACID 1,958 SH JEL
ASH 146,900 SH JEL
CALCIUM 20,600 SH JEL
CARBOHYDRATES 643,400 SH JEL
FAT 49,000 SH JEL
FIBER 139,900 SH JEL
IRON 400 SH JEL
KILOCALORIES 3,075 SH JEL
NIACIN 70 SH JEL
PHOSPHORUS 3,215 SH JEL
PROTEIN 160,800 SH JEL
RIBOFLAVIN 15 SH JEL
THIAMIN 6 SH JEL
WATER 857,000 SH JEL

ERYNGIUM FOETIDUM L.

“CULANTRO”

2-DODECEN-1-AL PL WOI
EO 200-400 PL WOI
SAPONIN RT HHB

ERYTHRINA BERTEROANA URB.

“PITO”

ASCORBIC-ACID 370-2,340 SH CRC
ASH 12,000-76,000 SH CRC
CALCIUM 1,080-6,835 SH CRC
CARBOHYDRATES 100,000-633,000 SH
CRC
BETA-CAROTENE 2-14 SH CRC
ERYSODINE SD ALK
ERYSOPINE SD ALK
ERYSOTHIOPINE SD ALK
ERYSOTHIOVINE SD ALK
ERYSOVINE SD ALK
ALPHA-ERYTHROIDINE SD ALK
BETA-ERYTHROIDINE SD ALK

FAT 2,000-13,000 SH CRC
 FIBER 24,000-152,000 SH CRC
 HYPAPHORINE SD ALK
 IRON 22-140 SH CRC
 KILOCALORIES 480-3,040 SH CRC
 NIACIN 12-75 SH CRC
 PHOSPHORUS 800-5,060 SH CRC
 PROTEIN 44,000-278,000 SH CRC
 RIBOFLAVIN 1.9-12 SH CRC
 THIAMIN 1.9-12 SH CRC
 WATER 842,000 SH CRC

ERYTHRINA CRISTA-GALLI L.

“COCKSPUR CORAL TREE”

ALKALOIDS 24,000-45,300 SD WOI
 ARACHIDIC-ACID 5,345 SD CRC WOI
 CRISTADINE PL JSG
 CRISTAMIDINE PL JSG
 CYANIDIN-3-GLUCOSIDE PL HHB
 CYANIDIN-3-SOPHOROSIDE PL HHB
 EICOSENOIC-ACID 15,000 SD CRC WOI
 ERYCRISTAGALLIN PL JSG
 ERYSODINE SD WOI
 ERYSONINE SD ALK
 ERYSOPINE SD WOI
 ERYSOTHIOPINE SD HHB
 ERYSOTHIOVINE SD HHB
 ERYSOVINE SD WOI
 ERYTHRALINE SD WOI
 ERYTHRAMINE SD WOI
 ERYTHRATINE SD WOI
 ERYTHRATINONE SD HHB
 BETA-ERYTHROIDINE SD HHB
 FAT 167,000 SD CRC
 HYPAPHORINE 21,000-29,000 SD WOI
 LINOLEIC-ACID 31,560 SD CRC WOI
 MYRISTIC-ACID 3,175 SD CRC WOI
 OLEIC-ACID 85,000 SD CRC WOI
 PALMITIC-ACID 19,000 SD CRC WOI
 PELARGONIDIN-3-GLUCOSIDE PL HHB
 PELARGONIDIN-3-SOPHOROSIDE PL
 HHB
 PROTEIN 303,000 SD CRC
 STEARIC-ACID 6,500 SD CRC WOI

ERYTHRINA FUSCA LOUR.

“CORAL BEAN”

“GALLITO”

ASCORBIC-ACID 30-780 LF CRC
 ASH 14,000-76,000 LF CRC
 CALCIUM 570-3,080 LF CRC

CARBOHYDRATES 117,000-633,000 LF
 CRC
 BETA-CAROTENE 23-125 LF CRC
 ERYSODINE SD ALK
 ERYSOPINE SD ALK
 ERYSOTHIOPINE PL CRC
 ERYSOTHIOVINE PL CRC
 ERYSOVINE SD ALK
 ERYTHRALINE SD ALK
 FAT 8,000-43,000 LF CRC
 FIBER 41,000-222,000 LF CRC
 HYPAPHORINE SD ALK
 IRON 18-52 LF CRC
 KILOCALORIES 600-3,243 LF CRC
 NIACIN 47-65 LF CRC
 PHOSPHORUS 400-2,220 LF CRC
 PROTEIN 46,000-249,000 LF CRC
 RIBOFLAVIN 1.7-5.2 LF CRC
 THIAMINE 2.4-9 LF CRC
 WATER 815,000 LF CRC

ERYTHROPHLEUM SUAVEOLENS

(GUILL. & PERROT.) BRENNAN

“ORDEAL TREE”

“SASSY BARK”

3BETA-ACETOXY-7ALPHA-HYDROXY-
 N-(2-HYDROXYPHENYL)-N-METHYL-
 (E)-CASS-13(15)-EN-16-AMIDE PL JAG
 CASSAIDINE BK ALK
 CASSAINE BK ALK
 CASSAMINE BK ALK
 DEHYDRONORERYTHROSUAMINE PL
 JSG
 ERYTHROPHLAMINE BK ALK
 ERYTHROPHLEINE BK ALK
 ERYTHROPHLEGUINE BK ALK
 HOMOPHLEINE BK ALK
 NORCASSAMIDIDE PL JSG
 NORCASSAMINE PL JSG
 NORERYTHROSUAMINE PL JSG

ERYTHROXYLUM COCA LAM.

VAR. COCA

“COCA”

ACONITASE PL JRF1/
 ADENYLATE-KINASE PL JRF
 ALANINE-AMINOTRANSFERASE PL
 JRF
 ALCOHOL-DEHYDROGENASE PL
 JRF
 ALKALINE-PHOSPHATASE PL JRF

- ALKALOIDS 2,500-22,500 LF DAP3/
 ALUMINUM 395-420 LF DAP
 BETA-AMYRIN LF HEG
 ASCORBIC-ACID 14-15 LF DAP
 ASH 46,000-96,250 LF DAP
 BARIUM 46-48 LF DAP3/
 BENZOYLACGONINE LF DAP
 BENZOYL TROPINE LF DAP
 BIOTIN 0.8-1 LF DAP
 BORON 53-57 LF DAP
 CAFFEIC-ACID LF HEG
 CALCIUM 8,200-20,300 LF DAP UNP
 CARBOHYDRATES 424,000-648,000 LF
 DAP
 BETA-CAROTENE 5.4-7 LF DAP
 CEROTIC-ACID LF HHB
 CHLOROGENIC-ACID PL HHB
 CHROMIUM 3.5-3.8 LF DAP3/
 CINNAMYL COCAINE LF DAP
 COCAINE LF DAP
 BETA-COCAINE (sic) PL JSG
 COPPER 2.2-13 LF DAP UNP
 CUSCOHYGRINE LF DAP
 CYANIDIN LF HEG
 CYTOCHROME-OXIDASE PL JRF
 DIAPHORASE PL JRF
 DIHYDROBENZALDEHYDES 75-505 LF
 PM53:113
 (-)-DIHYDROCUSCOHYGRINE PL JSG
 DIHYDROXYTROPANE LF DAP
 N,N-DIMETHYLBENZYLAMINE 1-6 LF
 PM53:113
 ELLAGITANNINS LF JE3:283
 EO 200-1,300 LF HHB JE3:281
 ERYTHRODIOL MONOSTEARATE FR
 JE3:284
 FAT 16,000-53,475 LF DAP
 FIBER 80,000-175,000 LF DAP
 FRUCTOSE-BIPHOSPHATASE PL JRF
 GALACTOSE-DEHYDROGENASE PL
 JRF
 GERANIIN 3,000-3,100 LF JE3:283
 PC19:551
 GLUCOSE-6-PHOSPHATE-DEHYDROGE-
 NASE PL JRF
 GLUCOSE-TRIPHOSPHATE-ISOMERASE
 PL JRF
 GLUTAMATE-DEHYDROGENASE PL
 JRF
 GLUTATHIONE-REDUCTASE PL JRF
 GLYCERALDEHYDE-3-PHOSPHATE PL
 JRF
 GLYCERATE-2-DEHYDROGENASE PL
 JRF
 TRANS-2-HEXANAL 20-135 LF PM53:113
 1-HEXANOL 10-65 LF PM53:113
 CIS-3-HEXEN-1-OL 32-210 LF PM53:113
 HYGRINE LF DAP
 HYGROLINE LF DAP
 IODINE 0.05 LF DAP
 IRON 66-490 LF DAP UNP
 ISOCITRATE-DEHYDROGENASE PL JRF
 ISOQUERCITRIN 100 LF HEG HHB
 KAEMPFEROL PL JLS58:134
 KAEMPFEROL-3-O-ARABINOSIDE LF
 SBO7:121
 KAEMPFEROL-3-O-
 GALACTOSYLXYLOSIDE LF SBO7:121
 KAEMPFEROL-3-O-GLUCOSIDE LF
 SBO7:121
 KAEMPFEROL-3-O-
 GLUCOSYLXYLOSIDE LF SBO7:121
 KAEMPFEROL-3-O-
 XYLOSYL GALACTOSIDE LF SBO7:121
 KAEMPFEROL-3-O-
 XYLOSYL GLUCOSIDE LF SBO7:121
 KILOCALORIES 3,050-3,260 LF DAP
 LACTATE-DEHYDROGENASE PL JRF
 LEUCOCYANIDIN LF HEG
 LEUCYL-ALANINE-PEPTIDASE PL JRF
 LEUCYL-LEUCYL-LEUCINE-PEPTIDASE
 PL JRF
 MAGNESIUM 2,130-5,700 LF DAP UNP
 MALIC-ENZYME
 MANGANESE 26-71 LF DAP UNP
 METHYL COCAINE LF DAP
 N-METHYLPYRROLE 7-48 LF PM53:113
 METHYL-SALICYLATE 25-175 (-1,300
 HEG) LF PM53:113
 NIACIN 13-61 LF DAP
 NICOTINE LF DAP
 PALMITIC-ACID LF HEG
 PALMITYL-BETA-AMYRIN LF HHB
 PANTOTHENIC-ACID 7 LF DAP
 PHENYLALANYL-PROLINE-PEPTIDASE
 PL JRF
 6-PHOSPHOGLUCONATE-DEHYDROGE-
 NASE PL JRF
 PHOSPHORUS 3,630-9,740 LF DAP
 PHYTOSTEROLS PL HHB
 POTASSIUM 5,000-21,600 LD DAP UNP
 PROCYANIDINS LF JE3:283
 PROTEIN 187,000-202,000 LF DAP
 PYRUVATE-KINASE PL JRF
 QUERCETIN-3-O-ARABINOSIDE LF
 SBO7:121
 QUERCETIN-3-O-
 GALACTOSYLXYLOSIDE LF SBO7:121

QUERCETIN-3-O-GLUCOSIDE LF
 SBO7:121
 QUERCETIN-3-O-
 GLUCOSYLGALACTOSIDE LF
 SBO7:121
 QUERCETIN-3-O-GLUCOSYLXYLOSIDE
 LF SBO7:121
 QUERCETIN-3-O-
 XYLOSYLGALACTOSIDE LF SBO7:121
 QUERCETIN-3-O-XYLOSYLGLUCOSIDE
 LF SBO7:121
 QUERCITRIN LF HHB
 RIBOFLAVIN 15-20 LF DAP
 RUTIN 5,000 LF HEG HHB
 SODIUM 400-435 LF DAP
 STRONTIUM 97-104 LF DAP3/
 THIAMIN 3.5-8 LF DAP
 D-ALPHA-TOCOPHEROL 30 LF DAP
 TRIOSE-PHOSPHATE-ISOMERASE PL
 JRF
 TROPACOCAINE LF DAP
 ALPHA-TRUXILLINE LF DAP
 BETA-TRUXILLINE LF DAP
 ALPHA-TRUXINIC-ACID LF CCO
 BETA-TRUXINIC-ACID LF CCO
 VIT-B6 5 LF DAP
 VIT-B12 0.01 LF DAP
 WAX LF HHB
 XANTHINE-DEHYDROGENASE PL JRF
 WATER 65,000-800,000 LF JAD
 ZINC 18-29 LF DAP UNP

DAP3/=DUKE, AULIK,PLOWMAN.
 BOT.MUS.LFL.1975 FOOTNOTED
 MINERALS SEEM TOO HIGH, EVEN
 FOR COCA JFR1/=PERSONAL COM-
 MUNICATION, JRF,1/29/87/
 SBO=SYSTEMATIC BOTANY 7(2):121-
 133. 1982. UNP=UNPUBLISHED USDA
 STUDIES

ERYTHROXYLUM COCA LAM.

VAR. *IPADU* PLOWMAN

"AMAZONIAN COCA"

"IPADU"

COCAINE LF
 KAEMPFEROL-3-O-ARABINOSIDE LF
 SBO7:121
 KAEMPFEROL-3-O-
 GALACTOSYLXYLOSIDE LF SBO7:121
 KAEMPFEROL-3-O-GLUCOSIDE LF
 SBO7:121

KAEMPFEROL-3-O-
 GLUCOSYLXYLOSIDE LF SBO7:121
 KAEMPFEROL-3-O-
 XYLOSYLGALACTOSIDE LF SBO7:121
 KAEMPFEROL-3-O-
 XYLOSYLGLUCOSIDE LF SBO7:121
 QUERCETIN-3-O-ARABINOSIDE LF
 SBO7:121
 QUERCETIN-3-O-GLUCOSIDE LF
 SBO7:121
 QUERCETIN-3-O-
 GLUCOSYLGALACTOSIDE LF
 SBO7:121
 QUERCETIN-3-O-GLUCOSYLXYLOSIDE
 LF SBO7:121
 QUERCETIN-3-O-
 XYLOSYLGALACTOSIDE LF SBO7:121
 QUERCETIN-3-O-XYLOSYLGLUCOSIDE
 LF SBO7:121

ERYTHROXYLUM

NOVAGRANATENSE (MORRIS)

HIERON. VAR.

NOVAGRANATENSE

"COCA"

ALKALOIDS 14,000 LF HHB
 BENZOYLECGONINE LF CCO
 CALCIUM 10,200-13,000 LF UNP
 (+)-CATECHIN-3-O-ALPHA-L-
 RHAMNOPYRANOSIDE ST
 PC25:1205
 (+)-CATECHIN-3-RHAMNOSIDE PL
 JSG
 CINNAMYLCOCAINE LF CCO
 COCAINE LF
 COPPER 2.5-2.7 LF UNP
 ERYTHRODIOL FR HHB
 GENTISIC-ACID LF JE3:281
 IRON 86-97 LF UNP
 ISOQUERCITRIN 100 LF HEG HHB
 KAEMPFEROL-3-O-GLUCOSIDE LF
 SBO7:121
 KAEMPFEROL-3-O-RUTINOSIDE LF
 SBO7:121
 MAGNESIUM 3,800-6,900 LF UNP
 MANGANESE 28-55 LF UNP
 METHYL-SALICYLATE 1,300 LF HEG
 HHB
 OMBUIN-3-O-RUTINOSIDE
 LF SBO7:121
 PALMITYL-BETA-AMYRIN LF HHB
 POTASSIUM 6,600-7,800 LF UNP

QUERCETIN-3-O-GLUCOSIDE LF
SBO7:121
QUERCETIN-3-O-RUTINOSIDE LF
SBO7:121
QUERCETIN-3-O-TRIGLYCOSIDE LF
SBO7:121
RUTIN 5,000 LF HEG
ZINC 16-33 LF UNP

UNP=UNPUBLISHED USDA STUDIES

ERYTHROXYLUM
***NOVAGRANATENSE* VAR.**
***TRUXILLENSE* (RUSBY)**
PLOWMAN

“COCA”

CALCIUM 7,600-14,600 LF UNP
CINNAMOYLCOCAINE PL JSG
COCAINE LF JAD
BETA-COCAINE PL JSG
COPPER 2.7-2.9 LF UNP
CUSCOHYDRINE LF CCO
CUSKHYGRINE PL JSG
HYGRINE LF CCO
HYGROLINE LF CCO
IRON 49-81 LF UNP
KAEMPFEROL-3-O-ARABINOSIDE LF
SBO7:121
KAEMPFEROL-3-O-GLUCOSIDE LF
SBO7:121
KAEMPFEROL-3-O-RUTINOSIDE LF
SBO7:121
MAGNESIUM 5,200-6,700 LF UNP
MANGANESE 35-36 LF UNP
OMBUIN-3-O-RUTINOSIDE LF SBO7:121
POTASSIUM 2,000-2,600 LF UNP
(+)-PSEUDOCOCAINE PL JSG
QUERCETIN-3-O-ARABINOSIDE LF
SBO7:121
QUERCETIN-3-O-GLUCOSIDE LF
SBO7:121
QUERCETIN-3-O-RUTINOSIDE LF
SBO7:121
QUERCETIN-3-O-TRIGLYCOSIDE LF
SBO7:121
ALPHA-TRUXILLINE LF CCO
BETA-TRUXILLINE LF CCO
WATER 100,000-800,000 LF JAD
ZINC 19-22 LF UNP

UNP=UNPUBLISHED USDA STUDIES

ESCHSCHOLZIA CALIFORNICA
CHAM.

“CALIFORNIA POPPY”

ALLOCRYPTOPINE RT ALK
BERBERINE SH HHB
BISNORARGEMONINE PL ALK
CALIFORNIDINE SH ALK
CALIFORNINE SH ALK
(-)-ALPHA-CANADINE
METHOXYHYDROXIDE RT HHB
CHELERYTHRINE LF ALK
CHELILUTINE RT ALK
CHELIRUBINE RT ALK
CODEINE? PL ALK
COPTISINE RT ALK
CRYPTOCAVINE PL CRC
CRYPTOPINE SH ALK
ESCHOLIDINE RT HHB
ESCHOLINE RT ALK
ESCHOLININE RT HHB
ESCHSCHOLTZIDINE PL ALK
ESCHSCHOLTZIDINE 2,500 RT HHB
ESCHSCHOLTZXANTHIN PL HHB
FAT 468,000 SD CRC
FUMARIC-ACID PL HHB
FUMARINE PL CRC
GLAUCINE PL ALK
HCN RT CRC
IONIDINE PL ALK
LAUROSCHOLTZINE SH ALK
MORPHINE? PL ALK
PROTEIN 250,000 SD CRC
PROTOPINE SH ALK
RUTIN 5,000 FL CRC
SANGUINARINE SH ALK
SUCCINIC-ACID RT CRC
VIOLAXANTHIN PL HHB
XANTHOPHYLL PL HHB
ZEAXANTHIN PL HHB

EUCALYPTUS CITRIODORA
HOOK.

“LEMON EUCALYPTUS”

AROMADENDRENE LF BML
AROMADENDRIN PL JSG
BETULINIC-ACID PL JSG
CAMPHENE 1-20 LF BML
CARVONE LF BML
CARYOPHYLLENE 15-780 LF BML

1,8-CINEOLE 50-3,580 LF BML
 CITRAL LF BML
 CITRONELLAL 50-18,020 LF BML WOI
 CITRONELLOL 230-4,000 LF BML WOI
 CITRONELLYL-ACETATE 20-130 LF
 BML
 P-CYMENE 10-180 LF BML
 EO 5,000-20,000 WOI
 EUDESMOL LF BML
 EUGENOL LF BML
 GERANIOL 250-1000 LF GEO
 GUAJOL LF BML
 GUAICOL (SIC) LF WOI
 HYDROXYCITRONELLAL LF BML
 ISOPULEGOL 35-5,960 LF GEO
 LIMONENE 20-1,420 LF BML
 LINALOOL 15-180 LF BML
 7-O-METHYLAROMADENDRIN PL
 JSG
 MYRCENE 1-120 LF BML
 NEOISOPULEGOL 20-680 LF BML
 ALPHA-PINENE 5-380 LF BML
 BETA-PINENE 20-300 LF BML
 BETA-SITOSTEROL PL JSG
 TANNIN (48.2% KINO) WOI
 TERPINENE 1-180 LF BML
 TERPINOLENE 5-160 LF BML
 URSOLIC-ACID PL JSG

EUCALYPTUS GLOBULUS LABILL.

"BLUE GUM"

ALLO-AROMADENDRINE PL JSG
 AROMADENDRENE 50-350 LF AYL
 WOI
 ALPHA-AROMADENDRENE LF AYL
 BUTYRALDEHYDE LF GEO
 CAFFEIC-ACID LF AYL
 CAMPHENE LF AYL
 CAPROALDEHYDE LF AYL
 CARVONE LF AYL
 D-CATECHOL BK WD CCO
 CHLOROGENIC-ACID BK WD CCO
 1,8-CINEOLE 3,500-29,750 LF AYL
 CITRIODOROL KINO CRC
 CUMINALDEHYDE 25-135 LF WOI
 P-CYMENE LF AYL
 11,12-DEHYDROURSOLACTONE-
 ACETATE
 (1-2%WAX) LF HHB
 BETA-DIKETONE (56%WAX) LF HHB

ELLAGIC-ACID BK ST LF HHB CCO
 EO 5,000-35,000 LF AYL
 EPIGLOBULOL 28,000 LF AYL HHB
 ETHANOL LF GEO
 EUCALYPTIN LF AYL
 ALPHA-EUDESMOL PL JSG
 BETA-EUDESMOL PL JSG
 EUGLOBAL-IA1 CCO
 EUGLOBOL-IA2 CCO
 EUGLOBAL-IB CCO
 EUGLOBAL-IC CCO
 EUGLOBAL-IIA CCO
 EUGLOBAL-IIB CCO
 EUGLOBAL-IIC CCO
 EUGLOBAL-III 100 BD CCO
 EUGLOBAL-III 10 LF CCO
 EUGLOBAL-IVB CCO
 EUGLOBAL-VII CCO
 FERULIC-ACID LF AYL
 GALLIC-ACID BK ST LF AYL CCO
 GENTISIC-ACID LF AYL
 GLOBULOL LF AYL
 HYPEROSIDE LF AYL
 ISOAMYL-ALCOHOL LF GEO
 3-ISOPROPYLIDEN-1-ACETYL-5-
 CYCLOPENTENE LF GEO
 LEDOL LF AYL
 D-LINALOOL LF AYL
 3-OMETHYLELLAGIC-ACID-
 4'RHAMNOSIDE BK WD CCO
 D-MYRTENAL LF AYL GEO
 D-MYRTENOL LF GEO
 PARAFFIN 20,000 LF HHB
 ALPHA-PHELLANDRENE LF AYL
 PINENE 1,200-8,400 LF WOI
 ALPHA-PINENE LF AYL
 BETA-PINENE LF AYL
 PINOCARVEOL 20-140 LF WOI
 (-)-TRANS-PINOCARVEOL LF JSG
 PINOCARVONE LF AYL
 PROTOCATECHUIC-ACID LF AYL
 QUERCETIN LF AYL
 QUERCETOL PL JSG
 QUERCETOL-3-GLUCOSIDE PL JSG
 QUERCETRIN LF AYL
 QUERCITRIN PL JSG
 RUTIN 0-X LF AYL FT60:182
 GAMMA-TERPINENE LF AYL
 I-TERPINEOL LF GEO
 TRITRIACONTANE-16,18-DIONE
 VALERALDEHYDE LF GEO
 D-VERBENONE LF GEO
 VIRIDIFLOROL LF AYL

EUCOMMIA ULMOIDES OLIV.

"TU-CHUNG"

ARSENIC 0.24 BK CAL
 AUCUBIN PL HHB
 CALCIUM 10,200 BK CAL
 CHLOROGENIC-ACID LF HHB
 COPPER 5 BK CAL
 EUCCOMMIN-A PL JSG
 EUCCOMMIOL PL JSG
 GUTTA-PERCHA 20,000-65,000 BK CCO
 (+)-1-HYDROXYPINORESINOL-4,4'-GLUCOPYRANOSIDE PL JSG
 IRON 300 BK CAL
 LINOLEIC-ACID (10% SD OIL) SD HHB
 LINOLENIC-ACID (64-68% SD OIL) SD HHB
 MAGNESIUM 2,080 BK CAL
 MANGANESE 135 BK CAL
 (+)-MEDIORESINOL-DI-O-BETA-D-GLUCOPYRANOSIDE PL JSG
 MERCURY 0.92 BK CAL
 OLEIC-ACID (16-18% SD OIL) SD HHB
 (-)-OLIVIL-4',4"-DI-O-BETA-D-GLUCOPYRANOSIDE PL JSG
 PALMITIC-ACID (4.7% SD OIL) SD HHB
 POTASSIUM 6,170 BK CAL
 RESIN 70,000 BK CCO
 SODIUM 2,820 BK CAL
 STEARIC-ACID (2.5% SD OIL) SD HHB
 ULMOPRENOL BK CCO
 ULMOSIDE PL JSG
 ZINC 14 BK CAL

EUODIA RUTAECARPA BENTH.

"WOU CHOU YU"

CALCIUM 11,600 FR SMO
 COPPER 16 FR SMO
 CYCLIC-GUANOSINE-3',5'-MONOPHOSPHATE FR CCO
 DEHYDROEVODIAMINE LF HHB
 EO 20,000 FR CCO
 EVOCARPINE FR HHB
 EVODENE FR WOI
 EVODIAMINE LF HHB
 EVODINONE FR WOI
 EVODOL FR CCO
 EVOGINE FR WOI
 HIGENAMINE FR CCO
 HYDROXYEVODIAMINE LF HHB

IRON 86 FR SMO
 ISOEVODIAMINE
 LIMONENE LF HHB
 MAGNESIUM 4,950 FR SMO
 MANGANESE 63 FR SMO
 5-METHOXY-N-DIMETHYL-TRYPTAMINE FR CCO
 1-METHYL-2-(DELTA-8-TRIDECENYL)-4-QUINOLINONE FR HHB
 ALPHA-OCIMENE FR WOI
 POTASSIUM 14,600 FR SMO
 RHETSININE PL JSG
 RUTAECARPINE LF HHB
 RUTAEVINE LF HHB
 SODIUM 34 FR SMO
 L-SYNEPHRINE FR CCO
 CIS-TETRADECADIENONIC-ACID FR HHB
 WUCHUYINE PL JSG
 ZINC 18 FR SMO

EUONYMUS ATROPURPUREUS

JACQ.

"BURNING BUSH"

"WAHOO"

ASPARAGINE BK HHB
 ATROPUROL RE HHB
 ATROPURPURIN BK HHB
 CEROTIC-ACID PL HHB
 CITRIC-ACID PL HHB
 CITRULLOL BK HHB
 DULCITOL 20,900 RT HHB
 EUONIC-ACID PL HHB
 EUONYMOL BK HHB
 EUONYSTEROL RE HHB
 FURAN-BETA-CARBONIC-ACID RT HHB
 GALACTITOL PL CRC
 HOMOEUONYSTEROL RE HHB
 LINOLEIC-ACID PL HHB
 MALIC-ACID PL HHB
 PHYTOSTEROLS PL CRC
 TANNIN RT HHB
 TARTARIC-ACID PL HHB

EUPATORIUM PERFOLIATUM L.

"BONESET"

8BETA-ANGELOYLOXYEUPATUNDIN PL JSG
 ASTRAGALIN PL 411/
 DENDROIDINIC-ACID PL 411/

11,13ALPHA-DIHYDROEUPERFOLIDE
 PL JSG
 EUCANNABINOLIDE PL 411/
 EUFOLIATIN PL 411/
 EUFOLIATORIN PL 411/
 EUPAFOLIN PL 411/
 EUPATORIN PL 411/
 EUPERFOLIDE PL 411/
 EUPERFOLIN PL JSG
 EUPERFOLITIN PL 411/
 GALLIC-ACID
 GUM
 HEBENOLIDE PL 411/
 HELENALIN PL 411/
 7-HYDROXY-7-HYDRO-6-DEHYD
 RO-3,4(Z)-ALPHA-FARNESENE PL JSG
 HYPEROSIDE PL 411/
 KAEMPFEROL PL 411
 4-O-METHYLGLUCURONOXYLAN PL
 411/PC25:377.1986
 QUERCETIN PL 411/
 RESIN
 RUTIN PL 411/
 TANNIC-ACID
 URS-20-EN-3BETA-OL PL JSG

EUPHORBIA HIRTA L.

“QUEENSLAND ASTHMA HERB”
 20-O-ACETYLRESENERFENOL-9,13,14-
 ORTHOPHENYLACETATE
 ALPHA-AMYRIN RIZK
 BETA-AMYRIN RIZK
 ASCORBIC-ACID 443 LF WOI
 BETULIN ST HHB
 CAMPESTEROL PL 411/
 CAMPHOL
 CAOUTCHOUC LX
 CHLOROPHENOLIC-ACID RIZK
 CHOLESTEROL RIZK
 CHOLINE PL 411/RIZK
 P-COUMARIC-ACID LF HHB
 CYANIDIN-3,5-DIGLUCOSIDE PL 411/
 CYCLOARTENOL RIZK
 12-DEOXY-4BETA-HYDROXYPHORBOL-
 13-DODECANOATE-20-ACETATE RIZ
 12-DEOXY-4BETA-HYDROXYPHORBOL-
 13-PHENYLACETATE-20-ACETATE
 12-DEOXYPHORBOL-13-
 PHENYLACETATE-16-O-ALPHA-
 METHYLETC. RIZK
 3,4-DIOXYPHENYLALANINE 5,000 LX
 HHB

ELLAGIC-ACID
 EUPHORBOL-HEXOCOSONATE RIZK
 FAT 17,100 LF WOI
 FERULIC-ACID LF HHB
 FRIEDALIN PL 411
 FRIEDELIN
 GALLIC-ACID
 GUM
 HCN
 HENTRIACONTANE ST HHB
 L-HEXACOSANOL RIZK
 INGENOL-TRIACETATE
 INOSITOL RIZK
 JAMBULOL RIZK
 KAEMPFEROL LF HHB
 KAEMPFEROL-3-GLUCURONIDE LF
 HHB
 LEUCOCYANIDOL RIZK
 MELISSIC-ACID RIZK
 LINOLEIC-ACID WOI
 METHYLENECYCLOARTENOL RIZK
 MYRICYL-ALCOHOL ST MPI
 OLEIC-ACID
 PALMITIC-ACID
 PELARGONIN-3,5-DIGLUCOSIDE RIZK
 PROTEIN 46,500 LF WOI
 QUERCETIN PL 411/
 QUERCETIN-3-BETA-D-GLUCURONIDE
 ST HHB
 QUERCETOL RIZK
 QUERCETRIN PL 411/
 RESIN RIZK
 RHAMNETIN CCO
 RHAMNOSE RIZK
 SHIKIMIC-ACID PL 411/
 BETA-SITOSTEROL LF ST HHB
 TANNIC-ACID RIZK
 TARAXEROL ST HHB
 TARAXERONE ST HHB
 TRIACONTANE PL 411/
 WATER 781,400 LF WOI
 XANTHORHAMNIN

EUPHORBIA LATHYRIS L.

“CAPER SPURGE”
 “MOLE PLANT”

BETULIN
 CAOUTCHOUC LX HHB
 P-COUMARIC-ACID LF HHB
 DAPHNETIN SD HHB
 3,4-DIOXYPHENYLALANINE 5,000 LX
 HHB

L-DOPA 17,000 LX CRC
 6,20-EPOXYLATHYROL-5,10-
 DIACETATE-3-PHENYLACETATE PL
 JSG
 EUPHORBETIN SD HHB
 EUPHORBIASteroid SD HHB
 FAT 400,000-475,000 SD CRC HHB
 FERULIC-ACID LF HHB
 HENTRIACONTANE ST HHB
 16-HYDROXYINGENOL PL JSG
 7-HYDROXYLATHYROL PL JSG
 INGENOL—3-HEXADECANIC-ACID-
 ESTER PL HHB
 KAEMPFEROL LF HHB
 KAEMPFEROL-3-GLUCURONIDE LF
 HHB
 LATHYROLS SD HHB
 OLEIC-ACID 340,000-365,500 SD HHB
 PROTEIN 150,000 SD CRC
 QUERCETIN LF HHB
 QUERCETIN-3-BETA-D-GLUCURONIDE
 LF HHB
 BETA-SITOSTEROL LF HHB
 TARAXEROL ST HHB
 TARAXERONE ST HHB
 WAX 2,000 LF CRC

EUPHORBIA PULCHERRIMA
 WILLD.

“POINSETTIA”

N-ACETYLDIAMINOBTYRIC-ACID LX
 RAA
 ALPHA-AMYRIN PL HHB
 BETA-AMYRIN PL RAA
 BREIN PL RAA
 CAFFEIC-ACID PL HHB
 CAMPESTEROL PL RAA
 CHOLESTEROL PL RAA
 CYANIDIN-3-GALACTOSIDE FL RAA
 CYANIDIN-3-GLUCOSIDE FL RAA
 CYANIDIN-3-RUTINOSIDE FL RAA
 CYCLOARTENOL LX RAA
 DECA-2,4,6-TRIENOIC-ACID PL JSG
 ALPHA,GAMMA-DIAMINOBTYRIC-
 ACID LX HHB
 DIHYDROBRASSICASTEROL PL RAA
 EPI-GERMANICYL-ACETATE PL JSG
 GERMANICOL PL HHB
 GERMANICYL-ACETATE PL JSG
 GERMANICYL-BEHENATE PL JSG
 GERMANICYL-TETRACOSANOATE PL
 JSG

KAEMPFEROL-3-GALACTOSIDE FL
 RAA
 KAEMPFEROL-3-GLUCOSIDE FL RAA
 KAEMPFEROL-3-RHAMNOSIDE FL RAA
 KAEMPFEROL-3-RHAMNOSYL-
 GALACTOSIDE
 FL RAA
 KAEMPFEROL-3-RHAMNOSYL-
 GLUCOSIDE FL RAA
 KAEMPFEROL-3-O-RUTINOSIDE LF
 RAA
 2-METHYLANTHRAQUINONE PL JSG
 OCTAICOSANOL ST HHB
 PELARGONIDIN-3-GALACTOSIDE FL
 RAA
 PELARGONIDIN-3-GLUCOSIDE FL RAA
 PELARGONIDIN-3-RUTINOSIDE FL
 RAA
 PSEUDOTARAXASTEROL PL HHB
 PULCHEROL LX HHB
 QUERCETIN-3-GALACTOSIDE FL RAA
 QUERCETIN-3-GLUCOSIDE FL RAA
 QUERCETIN-3-RHAMNOSIDE FL RAA
 QUERCETIN-3-RHAMNOSYL-GALACTO-
 SIDE FL RAA
 QUERCETIN-3-RHAMNOSYL-GLU-
 COSIDE FL RAA
 RUTIN LF RAA
 BETA-SITOSTEROL ST HHB
 BETA-SITOSTEROL-D-GLUCOSIDE LF
 RAA

EUPHORBIA TIRUCALLI L.

“AVELOZ”

CAOUTCHOUC 28,000-38,000 LX CRC
 CITRIC-ACID 74,000 PL CRC
 3,3'-DI-O-METHYLELLAGIC-ACID ST
 CRC
 ELLAGIC-ACID ST CRC
 EUPHOL LX CRC
 EUPHORONE LX CRC
 GLUCOSE PL CRC
 HENTRIACONTANE ST CRC
 HENTRIACONTANOL ST CRC
 ISOEUPHORAL LX CRC
 KAMEPFEROL PL CRC
 MALIC-ACID PL CRC
 12-O-(2Z)(4E)-OCTADIENOYL-4-
 DEOXYPHORBOL-13-ACETATE LX
 CRC
 RESIN LX CRC
 SAPOGENIN-ACETATES 1,000 PL CRC
 BETA-SITOSTEROL ST CRC

SUCCINIC-ACID PL CRC
 TARAXERIN ST CRC
 TARAXASTEROL LX CRC
 TIRUCALLOL LX CRC

EUPHRASIA OFFICINALIS L.

“EYEBRIGHT”

ALUMINUM 99 PL PED
 ASCORBIC-ACID 67 PL PED
 ASH 86,000-126,000 PL PED WOI
 AUCUBIN PL HHB
 CAFFEIC-ACID PL VET
 CALCIUM 11,500 PL PED
 CARBOHYDRATES 738,000 PL PED
 BETA-CAROTENE 73.2 PL PED
 CATALPOL PL 411/
 CHOLINE PL VET
 CHROMIUM 7 PL PED
 COBALT 147 PL PED
 EO 1,500-1,700 PL HHB
 FAT 9,000 PL PED
 FERULIC-ACID PL VET
 FIBER 91,000 PL PED
 GALLOTANNINS 30,000-80,000 PL HHB
 GENIPOSIDE PL 411/
 IRON 310 PL PED
 KILOCALORIES 2,540 PL PED
 LUPROSIDE PL 411/
 MAGNESIUM 4,160 PL PED
 MANGANESE 126 PL PED
 NIACIN 337 PL PED
 PHOSPHORUS 2,100 PL PED
 POTASSIUM 13,000 PL PED
 PROTEIN 127,000 PL PED
 RIBOFLAVIN 18 PL PED
 SELENIUM 4.7 PL PED
 SILICON 303 PL PED
 SODIUM TR PL PED
 TANNINS 124,000 PL WOI
 THIAMIN 4.3 PL PED
 TIN 8 PL PED
 WATER 846,000 PL PED
 ZINC 35 PL PED

FAGOPYRUM ESCULENTUM MOENCH.

“BUCKWHEAT”

ALANINE 6,880 SD JEL
 ARACHIDIC-ACID 459 SD JEL
 ARGININE 11,910 SD JEL
 ASCORBIC-ACID 0 SD JEL

ASPARTIC-ACID 12,000 SD JEL
 ASH 19,000-24,000 SD CRC JEL WOI
 BORON 4-8 SD BOB JEL
 CAFFEIC-ACID PL JLS58:119 1/
 CALCIUM 241-1,140 SD CRC JEL WOI
 CAMPESTEROL 230 SD JEL
 CARBOHYDRATES 650,000-817,700 SD
 JEL WOI
 CARNAUBIC-ACID 990-1,200 SD WOI
 CHLORINE 138 SD JEL
 CHLOROGENIC-ACID PL HHB
 CITRIC-ACID 8,200 LF HHB
 CYANIDIN PL HHB
 CYSTINE 2,752 SD JEL
 3,4-DIHYDROXY-2-
 PIPERIDINOMETHANOL PL JSG
 FAGOPYRIN PL JSG
 FAT 19,800-24,000 SD JEL WOI
 FAGOPYRIN PL HHB
 FIBER 42,400-99,000 SD CRC JEL WOI
 GLUTAMIC-ACID 23,300 SD JEL
 GLYCINE 9,750 SD JEL
 HCN 7 SD WOI
 HISTIDINE 2,750 SD JEL
 HOMOORIENTIN CY HHB
 IODINE 0.016-0.155 SD WOI
 IRON 30-132 SD CRC JEL WOI
 ISOLEUCINE 6,080 SD JEL
 KILOCALORIES 3,350-3,897 SD CRC JEL
 LEUCINE 8,140 SD JEL
 LINOLEIC-ACID 3,960-6,078 SD JEL WOI
 LINOLENIC-ACID 917 SD JEL
 LYSINE 7,110 SD JEL
 LYSOPHOSPHATIDYLCHOLINE SD
 HHB
 LYSOPHOSPHATIDYLETHANOLAMINE
 SD HHB
 LYSOPHOSPHATIDYLSERINE SD HHB
 MALIC-ACID 15,100 LF HHB
 MALTASE SD WOI
 MOLYBDENUM 5.5 SD JEL
 MYRISTIC-ACID 115 SD JEL
 NIACIN 20-44 SD CRC JEL WOI
 NICKEL 1 SD JEL
 OLEIC-ACID 6,650-13,200 SD JEL WOI
 ORIENTIN CY HHB
 OXALIC-ACID 111,000 LF HHB
 PALMITIC-ACID 2,574-3,120 SD JEL
 WOI
 PANTOTHENIC-ACID 14 SD JEL
 PHENYLALANINE 5,045 SD JEL
 PHOSPHATIDYLCHOLINE SD HHB
 PHOSPHATIDYLETHANOLAMINE SD
 HHB

PHOSPHATIDYLSERINE SD HHB
 PHOSPHOLIPIDS 34,000 SD HHB
 PHOSPHORUS 2,820-3,200 SD CRC JEL
 WOI
 PHYTIN 12,000-24,000 SD WOI
 PHYTOSTEROLS 2,270 SD JEL
 POTASSIUM 3,715-4,480 SD CRC JEL
 PROLINE 5,965 SD JEL
 PROTEIN 103,000-129,000 SD CRC JEL
 WOI
 QUERCETIN PL JLS58:119 1/
 RIBOFLAVIN 1.7-1.8 SD CRC JEL
 RUTIN 40,000 FL WBB
 RUTIN 11,600-63,700 LF FT60:182
 RUTIN 4,300-68,300 PL HHB WOI
 PT60:182
 RUTIN 600-50,600 ST FT60:182
 L-SACCHAROPINE SD CCO
 SAPONARETIN CY HHB
 SELENIUM 0.2 SD JEL
 SERINE 7,110 SD JEL
 SILICIC-ACID PL HHB
 BETA-SITOSTEROL 1,880 SD JEL
 SODIUM 0 SD JEL
 STARCH 670,000 SD HHB
 STEARIC-ACID 460 SD JEL
 STIGMASTEROL 92 SD JEL
 THIAMIN 2.7-9 SD CRC JEL
 THREONINE 5,850 SD JEL
 TOCOPHEROL 42 SD JEL
 TRYPTOPHAN 2,065 SD JEL
 TYROSINE 2,750 SD JEL
 VALINE 8,140 SD JEL
 VITEXIN CY HHB
 WATER 110,000-128,000 SD CRC JEL
 WOI

1/ JLS data baes on *F. tataricum*

FERULA ALLIACEA BOISS.

"GARLIC FERULA"

BYAKANGELICIN MPI
 BYAKANGELICOL MPI
 COUMARIN
 EO 9,000 FR MPI
 FERULIN
 ISOPIMPINELLIN
 PHELLOPTERIN PL JSG

FERULA ASSA-FOETIDA L.

"ASAFETIDA"

ALLYLPROPYL-SULFIDE GUM 411/
 L-ARABINOSE GUM AYL

ASARESINOTANNOL GUM WOI
 ASH 15,000-100,000
 BASSORIN GUM HHB
 BYAKANGELICOL HHB
 2-BUTYLMETHYL-DISULFIDE GUM
 411/
 2-BUTYLMETHYL-TETRASULFIDE
 GUM 411/
 2-BUTYLMETHYL-TRISULFIDE GUM
 411/
 BUTYLPROPENYL-DISULFIDE
 (40-45%EO) WOI
 SEC-BUTYL-PROPENYL-DISULFIDE
 (4,500-7,650 PPM INRESIN) CCO
 BYAKANGELICOL HHB
 CADINENE EO 411/
 DIALLYL-SULFIDE GUM 411/
 EO (3-17%GUM) AYL
 FARNESFEROL GUM 411/
 FERULIC-ACID 13,000 EO HHB
 FOETIDIN GUM 411/
 GALACTOSE GUM AYL
 GLUCOSE GUM AYL
 GLUCURONIC-ACID GUM AYL
 GUM 250,000 AYL
 ISOPIMPINELLIN HHB
 KAMOLONOL PL JSG
 OXYDASE
 ALPHA-PINENE EO AYL
 BETA-PINENE EO AYL
 PROPENYL-SULFIDE GUM 411/
 RESIN 400,000-640,000
 RHAMNOSE GUM HHB
 UMBELLIFERONE EO CCO
 VALERIC-ACID EO AYL
 VANILLIN 600 AYL CCO

FERULA GUMMOSA BOISS.

"GALBANUM"

BORNEOL PL 411/
 BORNYL-ACETATE
 BULNESOL
 SEC-BUTYL-3-
 METHYLBUTANETHIOATE
 SEC-BUTYL-3-METHYL-Z-
 ENETHIOATE
 CADINENE PL 411/
 ALPHA-CADINOL
 CAMPHENE (0.5-1.0%) EO
 DELTA-3-CARENE (10-20%)
 2,6-DIETHYL-3-METHYLPYRAZINE
 AYL
 EO 50,000-300,000 GUM 411/

10-EPIJUNENOL GUM 411/
 10-EPIJUNENYL-ACETATE
 EPISHYOBUNOL
 EPISHYOBUNYL-ACETATE
 ALPHA-EUDESOL
 BETA-EUDESOL
 GAMMA-EUDESOL
 ALPHA-FENCHOL
 ALPHA-FENCHYL-ACETATE
 ALPHA-FENCHYL-ALCOHOL
 GALBANIC-ACID
 GALBANOL PL 411/
 GALBARESINIC-ACID
 GALBARESINOTANNOL
 GUAJOL GUM 411/
 GUAIAZULENE GUM 411/
 15-HEXADECANOLIDE
 ISOBUTYL-DISULFIDE
 ISOGUAJAZULENE HHB
 S-ISOPROPYL-3-
 METHYLBUTANETHIOATE GUM 411/
 ISOPROPYL-3-METHYLBUT-Z-
 ENETHIOATE
 LIMONENE (0.1-0.25%)
 LINALOOL GUM 411/
 LINALYL-ACETATE
 2-METHOXY-SEC-BUTYLPYRAZINE
 (0.05%) BML
 2-METHOXY-3-SEC-BUTYLPYRAZINE
 AYL
 15-METHYL-15,1-
 CYCLOPENTADECANOLIDE
 MYRCENE (0.5-1.0%)
 CIS-OCIMENE (0.1-0.25%)
 TRANS-OCIMENE (0.1-0.25%)
 14-PENTADECANOLIDE
 ALPHA-PINENE (10-20%)
 BETA-PINENE (45-50%)
 CIS,TRANS-PROPENYL-DISULFIDE
 RESINIC-ACID 300,000-400,000 GUM
 411/
 SHYOBUNOL
 SHYOBUNYL-ACETATE
 TERPINEOL GUM 411/
 TERPINOLENE GUM 411/
 ALPHA-TERPINYL-ACETATE
 13-TETRADECANOLIDE
 12-TRIDECANOLIDE
 TRICYCLEN (0.5-1.0%)
 CIS-UNDECA-1,3,5-TRIENE GUM
 411/
 TRANS-UNDECA-1,3,5-TRIENE GUM
 411/
 UMBELLIFERONE GUM 411/

FERULA JAESCHKEANA VATKE

“JAECHKE’S FERULA”

AZULENE 1,900 FR WOI
 DL-CADINENE
 L-CADINENE
 CAMPHENE 9,500 FR WOI
 CHAMAZULENE MPI
 CUMINALDEHYDE 494 FR WOI
 EO 38,000 FR
 EO 12,000 RT
 S-GUAIZULENE
 JAESCHFERIN PL JSG
 JAESCHKEANADIOL PL JSG
 D-A-PINENE 22,800-34,200 FR WOI
 D-L-PINENE

FERULA SUMBUL HOOK. f.

“SUMBUL”

ANGELIC-ACID
 BETAINE
 BUTYRIC-ACID
 EO 10,000
 METHYL-CROTONIC-ACID HHB
 RESIN 170,000 HHB
 SUMBULENE
 SUMBULIC-ACID HHB
 UMBELLIFERONE
 VALERIANIC-ACID
 VENILLIC-ACID SIC WOI

FICUS CARICA L.

“FIG”

ACIDS 1,000-4,400 FR WOI
 ALANINE 450-2,154 FR USA
 ALKALOIDS 500 FR RAA
 ALKALOIDS 1,700 LF RAA
 BETA-AMYRIN LF RAA
 APIGENIN-GLYCOSIDES FR 411/
 ARABINOSE FR RAA
 ARACHIDIC-ACID 2,520-3,150 SD WOI
 ARGININE 170-814 FR USA
 ASCORBIC-ACID 20-2,013 FR CRC RAA
 ASCORBIC-ACID 1,050 LF RAA
 ASH 5,000-57,000 FR CRC
 ASH 53,000-167,000 LF CRC WOI
 ASPARTIC-ACID 1,760-3,447 FR CRC
 BERGAPTEN 3,900 LF RAA
 BORIC-ACID FR WOI
 BORON 1-100 FR BOB
 CADALENE LF RAA

- CAFFEIC-ACID PL JLS58:117
 CALCIUM 350-4,228 FR CRC
 CALCIUM 31,600 LF CRC
 CAOUTCHOUC 24,000 LX WOI
 CARBOHYDRATES 98,000-918,143 FR
 CRC USA
 CARBOHYDRATES 164,000-632,000 LF
 CRC WOI
 BETA-CAROTENE 0.3-16 FR CRC
 CAROTENE 20 LF WOI
 CEROTINIC-ACID LX HHB
 CHLOROPHYLL-A FR RAA
 CHLOROPHYLL-B FR RAA
 CITRIC-ACID 1,000-4,400 FR WOI
 COPPER 0.6-3.6 FR USA
 COUMARINS 8,000 LF RAA
 P-CYMENE LF RAA
 CYSTINE 120-574 FR USA
 DIASTASE LX HHB
 ESTERASE LX HHB
 FAT 2,000-24,000 FR CRC
 FAT 17,000-59,000 LF CRC WOI
 FAT 240,000-300,000 SD HHB
 FERULIC-ACID PL JLS58:117
 FIBER 12,000-154,000 FR CRC
 FIBER 47,000-171,000 LF CRC WOI
 FICIN LX HHB
 FICUSIN LF WOI
 FLAVONOIDS 5,300 LF RAA
 FRUCTOSE 22,950 FR RAA
 FUCOSOGENIN LF RAA
 FUMARIC-ACID FR RAA
 FURANOCOUMARIN 600 LF RAA
 GALACTOSE LF RAA
 GALACTURONIC-ACID LF RAA
 GLUCOSE 31,050 FR RAA
 GLUTAMIC-ACID 720-3,447 FR USA
 GLYCINE 250-1,197 FR USA
 GLYCOSIDES 500 FR RAA
 ALKALOIDS 2,600 LF RAA
 GUAIACOL LF RAA
 GUAIAZULENE RT RAA
 HEMICELLULOSE 11,200 FR RAA
 HISTIDINE 110-527 FR USA
 INVERT-SUGAR 500,000-700,000 FR
 HHB
 IRON 3-57 FR CRC USA
 ISOLEUCINE 230-1,101 FR USA
 ISOSCHAFTOSIDE FR 411/
 KAEMPFEROL PL JLS58:117
 KILOCALORIES 420-3,600 FR CRC
 LEUCINE 330-1,580 FR USA
 LINOLEIC-ACID 1,440-6,893 FR USA
 LINOLEIC-ACID 84,000-105,000 SD HHB
 LINOLENIC-ACID 115,200-144,000 SD
 HHB
 LIPASE LX HHB
 LUPEOL LF RAA
 LUTEIN? FR RAA
 LYSINE 300-1,436 FR USA
 MAGNESIUM 158-872 FR USA
 MALIC-ACID 30,200 FR RAA
 MALIC-ACID 23,400 LF RAA
 MALONIC-ACID FR RAA
 MANGANESE 1-7 FR USA
 METHIONINE 60-287 FR USA
 MUCILAGE 8,000 FR WOI
 MUFA 660-3,159 FR USA
 MYRISTIC-ACID 20-96 FR USA
 NEOXANTHIN LF RAA
 NIACIN 3-32 FR CRC
 OLEIC-ACID 660-3,159 FR USA
 OLEIC-ACID 47,520-59,400 SD HHB
 OXALIC-ACID FR WOI
 PALMITIC-ACID 460-2,202 FR USA
 PALMITIC-ACID 12,552-15,690 SD WOI
 PANTOTHENIC-ACID 3-14 FR USA
 PECTIN 18,000-50,000 FR HHB RAA
 PECTIN 48,400 LF RAA
 PENTOSANS 8,300 FR WOI
 PENTOSAN 36,000 LF WOI
 PHENYLALANINE 180-862 FR USA
 PHOSPHORUS 129-2,764 FR CRC USA
 PHYTOSTEROLS 310-1,484 FR CRC
 POTASSIUM 1,770-11,662 FR CRC USA
 PROLINE 490-2,346 FR USA
 PROTEASE LX HHB
 PROTEIN 7,220-130,000 FR USA
 PROTEIN 43,000-142,000 LF CRC WOI
 PSORALEN 4,100 LF RAA
 PUFA 1,440-6,893 FR USA
 PYRROLIDINE-CARBOXYLIC-ACID FR
 RAA
 QUERCETIN PL JLS58:117
 QUINIC-ACID FR RAA
 RHAMNOSE LF RAA
 RIBOFLAVIN 0-5.7 FR CRC
 RUTIN 500-1,000 LF RAA
 SCHAFTOSIDE FR 411/
 SERINE 370-1,771 FR USA
 SFA 600-2,872 FR USA
 BETA-SITOSTEROL LF RAA
 SODIUM 10-366 FR USA
 STEARIC-ACID 120-574 FR USA
 STEARIC-ACID 5,232-6,540 SD WOI
 STIGMASTEROL LF WOI

SUCCINIC-ACID FR RAA
 SUCROSE 2,250 FR RAA
 THIAMIN 0-3.3 FR CRC
 THREONINE 240-1,149 FR USA
 TRYPTOPHAN 60-287 FR USA
 TYROSINE 320-1,532 FR USA
 UMBELLIFERONE LF RAA
 VALINE 280-1,340 FR USA
 VIOLAXANTHIN FR RAA
 VIT-B6 1-5.4 FR USA
 WATER 775,000-877,000 FR CRC
 WATER 676,000 LF WOI
 XANTHOTOXIN LF RAA
 XANTHOTOXOL LF RAA
 XYLOSE LF RAA
 ZINC 1-7 FR CRC

FILIPENDULA ULMARIA (L.)
 MAXIM.

“MEADOWSWEET”
 “QUEEN OF THE MEADOW”
 ANTHOCYANIDIN FL HHB
 AVICULARIN LF HHB
 CITRIC-ACID FL HHB
 COUMARIN PL 411/
 ETHYL-BENZOATE FL HHB
 ETHYL-SALICYLATE PL 411/
 FILALBIN LF HHB
 GAULTHERIN FL HHBHELIOTROPINE
 FL HHB
 2-HYDROXYPHENYLMETHYL-BETA-D-
 GLUCOPYRANOSIDE FL HHB
 HYPEROSIDE LF HHB
 ISOAMYLAMINE FL HHB
 ISOBUTYLAMINE FL HHB
 ISOSALICIN FL HHB
 METHOXY-BENZALDEHYDE PL 411/
 METHYL-SALICYLATE FL HHB
 MONOTROPIN PL 411/
 PHENETHYL-PHENYLACETATE FL
 HHB
 QUERCETIN FL HHB
 QUERCETIN-DIPENTOSIDE LF HHB
 RUTIN PL 411/
 SALICIN FL HHB
 SALICYLALDEHYDE 700,000 EO
 HHB
 SALICYLIC-ACID FL HHB
 SPIRAEIN FL HHB
 SPIRAEOSIDE FL HHB
 VANILLIN FL HHB

FIRMIANA SIMPLEX (L.)

W. F. WIGHT

“CHINESE PARASOL”

ARSENIC 0.30 SD CAL
 CAFFEINE SD CCO
 CALCIUM 2,310 SD CAL
 COPPER 15 SD CAL
 IRON 70 SD CAL
 MAGNESIUM 4,480 SD CAL
 MANGANESE 23 SD CAL
 MERCURY 0.10 SD CAL
 POTASSIUM 14,500 SD CAL
 SODIUM 78 SD CAL
 STERCULIC-ACID SD CCO
 ZINC 25 SD CAL

FOENICULUM VULGARE
 MILLER

“FENNEL”

ALANINE 7,890-8,655 FR USA
 ALUMINUM 56 SD PED
 CIS-ANETHOLE 10-300 FR BML
 CIS-ANETHOLE 50 PL BML
 TRANS-ANETHOLE 3,030-72,980 FR
 BML HHB
 TRANS-ANETHOLE 5,550 PL BML
 ANISALDEHYDE 1-1,080 FR BML
 ANISIC-ACID FR BML
 ANISIC-KETONE FR BML
 APIOLE FR AYL
 ARGININE 6,800-7,460 FR USA
 ASCORBIC-ACID 340-3,148 PL CRC
 ASCORBIC-ACID 0 FR PED
 ASH 79,600-93,026 FR USA
 ASH 17,000-170,000 PL CRC
 ASPARTIC-ACID 18,333-20,111 FR USA
 AVICULARIN LF CCO
 BENZOIC-ACID FR RIZK
 BERGAPTEN FR AYL
 BORON 1-36 LF BOB
 CAFFEIC-ACID <0.5 FR CRC(FSN)
 CALCIUM 1,000-10,556 LF CRC
 CALCIUM 880-13,941 FR CAL SMO USA
 CAMPHENE 10-540 FR BML
 CAMPHOR 10-180 FR BML
 CARBOHYDRATES 51,000-519,000 PL
 USA
 CARBOHYDRATES 522,900-577,680 FR
 BML
 3-CARENE 120-720 FR BML

- BETA-CAROTENE 21-241 PL CRC
 BETA-CAROTENE 0-1 FR USA
 CERYL-ALCOHOL FR RIZK
 CHOLINE SD WOI
 CHROMIUM 4-5 FR ABS 5/
 1,8-CINEOLE 1-300 FR BML
 1,8-CINEOLE PL BML
 CINNAMIC-ACID FR RIZK
 CITRIC-ACID FR RIZK
 COBALT 1-31 FR PED ABS 5/
 COLUMBIANETIN FR RIZK
 COPPER 8-24 FR CAL SMO ABS 5/
 O-COUMARIC-ACID FR RIZK
 P-COUMARIC-ACID 93 FR CRC(FSN)
 P-CYME NE 20-480 FR BML
 CYNARIN PL HHB
 CYSTINE 2,220-2,435 FR USA
 DIANETHOLE FR 411/
 DILLAPIOL (90%) EO RT HHB
 DIPENTENE EO GEO
 N-DOCOSYL-ARACHIDATE
 N-EICOSYL-ARACHIDATE
 EO 10,000-80,000 FR BML CRC WOI
 EO 10,000 PL BML GEO
 ESTRAGOLE TR-64,000 FR 411/
 FAT 4,000-46,000 PL CRC
 FAT 120,000-280,000 FR HHB USA
 FENCHONE 10-24,000 FR BML 411/
 FENCHONE 30 PL BML
 FENCHYL-ALCOHOL EO SD GEO
 FERULIC-ACID <0.5 FR CRC(FSN)
 FIBER 5,000-50,000 PL CRC
 FIBER 144,250-183,338 FR USA
 FUMARIC-ACID FR RIZK
 GENTISIC-ACID FR RIZK
 GLUTAMIC-ACID 29,560-32,427 FR USA
 GLYCINE 11,070-12,144 FR USA
 GLYCOLLIC-ACID PL HHB
 N-HEXACOSYL-ARACHIDATE
 HISTIDINE 3,310-3,631 FR USA
 P-HYDROXYBENZOIC-ACID FR RIZK
 P-HYDROXYCINNAMIC-ACID FR RIZK
 IMPERATORIN 0-3 FR RIZK
 IODINE 0.002 FR WOI
 IRON 100-240 FR CAL SMO USA
 IRON 27-270 PL CRC
 ISOLEUCINE 6,950-7,624 FR USA
 ISOQUERCITRIN FR AYL
 ISOPIMPINELLIN 0-1 FR BML
 KAEMPFEROL PL JLS58:149
 KAEMPFEROL-3-ARABINOSIDE LF
 HHB
 KAEMPFEROL-3-GLUCURONIDE LF
 HHB
- D-LIMONENE FR CCO
 L-LIMONENE FR CCO
 LIMONENE 200-9,420 FR BML
 LIMONENE 1,800 PL BML
 LINALOOL 1-2,050 FR BML HHB
 LINALOOL 60 PL BML
 LINOLEIC-ACID 14,000-18,539 FR USA
 WOI
 MAGNESIUM 1,730-5,012 FR CAL SMO
 USA
 MALIC-ACID FR RIZK
 MANGANESE 24-721 FR CAL SMO
 ABS 5/
 MARMESIN FR RIZK
 METHIONINE 3,010-3,302 FR USA
 5-METHOXYPSORALEN 0-5 FR
 8-METHOXYPSORALEN 0-1 FR
 METHYL-CHAVICOL 70-4,018 FR BML
 HHB
 METHYL-CHAVICOL 390 PL BML
 MYRCENE 100-2,700 FR BML
 MYRISTICIN FR AYL
 NIACIN 7-65 PL CRC
 NIACIN 60-66 FR USA
 NICKEL 1.0 FR ABS 5/
 CIS-OCIMENE 40-600 FR BML
 TRANS-OCIMENE 20-330 FR BML
 N-OCTACOSYL-ARACHIDATE
 OLEIC-ACID 22,000-108,712 FR USA
 OSTHENOL FR AYL
 PALMITIC-ACID 4,000-6,000 FR
 PECTIN FR
 PETROSELINIC-ACID 72,000-168,000 FR
 HHB
 ALPHA-PHELLANDRENE 44-6,600 FR
 BML
 ALPHA-PHELLANDRENE 135 PL BML
 BETA-PHELLANDRENE 170-1,020 FR
 PHENYLALANINE 6,470-7,098 FR USA
 PHOSPHORUS 510-5,100 PL CRC
 PHOSPHORUS 4,449-5,960 FR PED USA
 PHOTOANTHEOLE FR 411/
 ALPHA-PINENE 200-8,820 FR BML
 ALPHA-PINENE 480 PL BML
 BETA-PINENE 1-780 FR BML
 BETA-PINENE 10 PL BML
 POTASSIUM 3,380-39,700 PL CRC
 POTASSIUM 14,800-19,400 FR CAL SMO
 USA
 PROLINE 9,000-9,873 FR USA
 PROTEIN 28,000-280,000 PL CRC
 PROTEIN 148,735-200,000 FR HHB USA
 PROTOCATECHUIC-ACID FR RIZK
 PSORALEN 0-1 FR RIZK

QUERCETIN FR RIZK
 QUERCETIN-3-ARABINOSIDE PL HHB
 QUERCETIN-3-L-ARABINOSIDE PL
 HHB
 QUERCETIN-3-GLUCURONIDE PL HHB
 QUINIC-ACID FR RIZK
 RIBOFLAVIN 1-14 PL CRC
 RIBOFLAVIN 4 FR USA
 RUTIN FR AYL
 SABINENE 1-60 FR BML
 SCOPARONE FR RIZK
 SCOPOLETIN FR RIZK
 SELENIUM 16 FR PED
 SERINE 9,000-9,873 FR USA
 SESELIN FR RIZK
 SHIKIMIC-ACID FR RIZK
 SILICON 4.2 FR PED
 SINAPIC-ACID FR RIZK
 BETA-SITOSTEROL FR RIZK
 SODIUM 50-1,980 FR SMO USA
 STIGMASTEROL FR RT HHB
 STIGMASTEROL-PALMITATE RT
 HHB
 SUGAR 40,000-50,000 FR HHB
 SYRINGIC-ACID FR RIZK
 TARTARIC-ACID FR RIZK
 TRANS-1,8-TERPIN FR AYL
 TERPINEN-4-OL 10-60 FR BML
 ALPHA-TERPINENE 1 FR BML
 ALPHA-TERPINENE 135 PL BML
 GAMMA-TERPINENE 1-342 FR BML
 GAMMA-TERPINENE 135 PL BML
 ALPHA-TERPINEOL 1-6 FR BML
 TERPINOLENE 10-60 FR BML
 TERPINOLENE 230 PL BML
 N-TETRACOSYL-ARACHIDATE CCO
 THIAMIN 1-11 PL CRC
 THIAMIN 4-5 FR USA
 THREONINE 6,020-6,604 FR USA
 ALPHA-THUJENE FR AYL
 TIN 11 FR PED
 TOCOPHEROL FR AYL
 GAMMA-TOCOTRIENOL FR AYL
 N-TRIACONTYL-ARACHIDATE CCO
 TRIGONELLINE FR WOI
 TRYPTOPHAN 2,530-2,775 FR USA
 TYROSINE 4,100-4,498 FR USA
 UMBELLIFERONE FR RT HHB
 UREASE LF RT ST HHB
 VALINE 9,150-10,037 FR USA
 VANILLIC-ACID <0.5 FR CRC(FSN)
 VANILLIN FR RIZK
 WATER 842,000-900,000 PL CRC
 WATER 80,670-104,796 FR USA

XANTHOTOXIN FR RIZK
 ZINC 7.1-33 FR CAL PED SMO ABS 5/
 5/Abs=Pak.J.Sci.Ind.Res.28:234.1985

FORSYTHIA SUSPENSVA VAHL

“LIEN-CHIAO; LIAN-JIAO”

ARCTIIN FR CCO
 BETULINIC-ACID FR CCO
 CALCIUM 4,380 FR SMO
 COPPER 19 FR SMO
 FORSYTHID FR CCO
 FORSYTHIDMETHYLETHER FR CCO
 FORSYTHOSIDE-A LF CCO
 FORSYTHOSIDE-B LF CCO
 FORSYTHOSIDE-C LF CCO
 FORSYTHOSIDE-D LF CCO
 IRON 440 FR SMO
 MAGNESIUM 1,160 FR SMO
 MANGANESE 120 FR SMO
 MATAIRESINOSIDE FR CCO
 OLEANOLIC-ACID FR CCO
 PHILLYGENIN FR CCO
 PHILLYRIN BK FR LF CCO
 D-PINORESINOL FR CCO
 D-PINORESINOL-BETA-D-GLUCOSIDE
 FR CCO
 POTASSIUM 9,560 FR SMO
 QUERCETIN FL HHB
 RUTIN FR CCO
 RUTIN 1,000 FL HHB
 SODIUM 105 FR SMO
 SUSPENSASIDE FR CCO
 SYRINGIN LF HHB
 URSOLIC-ACID FR CCO
 ZINC 17 FR SMO

FRAGARIA SPP

“STRAWBERRY”

(+)-ABSCISIC-ACID
 ALANINE 310-3,677 FR USA
 ALUMINUM 3-70 FR AAS
 GAMMA-AMINOBTYRIC-ACID
 ANTHOCYANIN
 ARBUTIN LF WOI
 ARGININE 260-3,084 FR USA
 ARSENIC <0.01 FR AAS
 ASCORBIC-ACID 3,190-4,350 LF WOI
 ASCORBIC-ACID 400-6,948 FR HHB
 USA WOI
 ASH 3,900-52,065 FR AAS USA
 ASPARAGINE

- ASPARAGINIC-ACID
 ASPARTIC-ACID 1,380-16,370 FR USA
 BORON 1-160 FR AAS BOB
 BROMINE <1 FR AAS
 CADMIUM 0.004-0.18 FR AAS
 CAFFEIC-ACID 15-34 FR CRC(FNS)
 CALCIUM 135-2,900 FR HHB USA
 CARBOHYDRATES 70,200-850,000 FR
 CRC USA
 BETA-CAROTENE 0.089-7 FR CRC
 JAF37:657
 CATECHIN FR HHB
 CATECHOL FR HHB
 CHLOROGENIC-ACID FR CRC(FNS)
 CHROMIUM 0.005-0.18 FR AAS
 CINNAMIC-ACID-METHYL-ESTER
 CITRAL LF HHB
 CITRIC-ACID 3,500-8,000 FR WOI
 COBALT 0.004-2 FR AAS ABS
 COPPER 0.4-17 FR USA
 P-COUMARIC-ACID 63-125 FR
 CRC(FNS)
 CYANIDIN PL JLS58:130
 CYSTINE 50-593 FR USA
 DIHYDROTRIMETHYLNAPHTHALENE
 LF
 ELLAGIC-ACID 430-8,430 FR HS26(1):66
 ELLAGIC-ACID 8,080-32,300 LF
 HS26(1):66
 ELLAGIC-ACID 1,370-21,650 SD
 HS26(1):66
 ELLAGITANNIN LF HHB
 EO
 FAT 2,350-59,893 FR USA
 FAT 190,000 SD
 FIBER 5,300-181,000 FR USA
 FLUORINE 0.03-0.9 FR AAS
 FOLACIN 0.1-0.2 FR USA
 FURFURAL LF
 GALLIC-ACID 80-121 FR CRC(FNS)
 GALLOCATECHIN FR HHB
 GENTISIC-ACID FR CRC(FNS)
 GLUTAMIC-ACID 900-10,676 FR USA
 GLUTAMINE
 GLYCINE 240-2,847 FR USA
 2-HEXEN-1-AL
 CIS-3-HEXEN-1-OL
 HISTIDINE 120-1,423 FR USA
 P-HYDROXYBENZOIC-ACID 19-108 FR
 CRC(FNS)
 IODINE 0.157-0.230
 IRON 3-100 FR CRC USA
 ISOLEUCINE 140-1,661 FR USA
 KAEMPFEROL LF HHB
 KAEMPFEROL-3-BETA-GLUCURONIDE
 KAEMPFEROL-3-BETA-
 MONOGLUCOSIDE FR HHB
 KAEMPFEROL-7-MONOGLUCOSIDE FR
 HHB
 KILOCALORIES 300-3,559 FR USA
 LECITHIN 620 FR
 LEUCINE 310-3,667 FR USA
 LEUCOANTHOCYANIN LF HHB
 LINALOOL LF
 LINOLEIC-ACID 1,080-12,811 FR USA
 LINOLEIC-ACID 153,900 SD WOI
 LINOLENIC-ACID 9,975 SD WOI
 ALPHA-LINOLENIC-ACID 780-9,253 FR
 USA
 LUTEIN 0.3-3 FR JAF37:657
 LUTEOFOROL LF HHB
 LYSINE 250-2,966 FR USA
 MAGNESIUM 98-1,545 FR AAS USA
 MALIC-ACID 3,500-8,000 FR WOI
 MALVIDIN-3,5-DIGLUCOSIDE FR
 MANGANESE 1.4-125 FR AAS FNF USA
 MERCURY 0.0002-0.009 FR AAS
 METHIONINE 10-119 FR USA
 METHYL-FURFURAL
 2-METHYL-NAPHTHALENE
 METHYL-SALICYLATE LF
 MOLYBDENUM <0.1 FR AAS
 MUFA 520-6,168 FR USA
 NEOCHLOROGENIC-ACID FR CRC(FNS)
 NIACIN 2.3-27 FR USA (-173)
 NICKEL 0.03-0.36 FR AAS
 NICOTINIC-ACID 2
 NITROGEN 880-10,000 FR AAS
 N-NONAL LF
 N-NONANOL LF
 N-OCTANOL LF HHB
 OLEIC-ACID 510-6,050 FR USA
 OLEIC-ACID 9,975 SD WOI
 PALMITIC-ACID 140-1,661 FR USA
 PALMITOLEIC-ACID 10-119 FR USA
 PANTOTHENIC-ACID 3.4-40 FR USA
 PECTIN 5,400 FR
 PELARGONIC-ACID LF HHB
 PELARGONIDIN-3-MONOGLUCOSIDE
 FR HHB
 PHOSPHORUS 185-3,191 FR USA WOI
 PHYTOSTEROLS 120-1,423 FR USA
 POTASSIUM 1,400-22,500 LF AAS USA
 WOI
 POTASSIUM-OXIDE
 PROLINE 190-1,898 FR USA
 PROTEIN 5,840-85,000 FR CRC USA
 PROTOCATECHUIC-ACID FR CRC(FNS)

PUFA 1,860-22,064 FR USA
 QUERCETIN LF JLS58:130
 QUERCETIN-3-BETA-MONOGLUCOSIDE
 FR
 QUERCETIN-3-BETA-GLUCURONIDE
 FR HHB
 QUERCITRIN LF HHB
 RIBOFLAVIN 0.7-8 FR CRC HHB USA
 RUBIDIUM 0.2-6.5 FR AAS
 SALICYLIC-ACID FR CRC(FNS)
 SELENIUM >0.002 FR AAS
 SERINE 230-2,728 FR USA
 SFA 200-2,372 FR USA
 SILICON 10-270 FR AAS
 SODIUM 8-106 FR CRC USA
 STEARIC-ACID 40-475 FR USA
 SULFUR 77-1,270 FR AAS
 TANNIN LF
 ALPHA-TERPINEOL LF
 THIAMIN 0.2-4 FR WOI CRC USA
 THREONINE 190-2,254 FR USA
 ALPHA-TOCOPHEROL 1-54 FR TOT
 USA
 TRYPTOPHAN 70-830 FR USA
 VALINE 180-2,135 FR USA
 VANILLIC-ACID 3-25 FR CRC(FNS)
 VIT-B6 0.6-7 FR USA
 WATER 870,000-917,000 FR CRC USA
 ZINC 1.1-17 FR AAS USA

AAS=ACTA AGRIC SCAND SUPPL
 22:1980; H₂O=89%; ZMB=9.09 X APB

FRANGULA ALNUS MILLER

“BUCKTHORN”

ALOE-EMODIN
 ALOIN
 AMYGDALIN
 ANTHRAQUINONES 30,000-70,000 BK
 411/
 ANTHRONE BK
 ANTHRONE-GLYCOSIDE BK
 ARACHIDIC-ACID
 ARMEPAVINE BK 411/
 BARBALOIN BK
 BETA-CAROTENE FR
 CATECHIN
 CHRYSOPHANOL BK
 DESOXYBARBALOIN
 1,8-DIHYDRO-2-ACETYL-NAPHTHA-
 LENE BK
 EMODIN BK
 EMODIN-DIANTHRONE BK 411/

EMODIN-1-GLUCOSIDE
 EMODIN-8-GLUCOSIDE PL JSG
 EMODIN-8-O-BETA-GENTIOBIOSIDE
 BK 411/E
 FRANGANINE PL JSG
 FRANGUFOLINE PL JSG
 FRANGULANINE-B PL JSG
 FRANGULIN-A
 FRANGULIN-B
 FRANGULAROSIDE
 GALLOTANNIN
 GLUCOFRANGULIN-A PL JSG
 GLUCOFRANGULIN-B
 GLUCOFRANBGULOSIDES BK 411/
 HELICIN
 JESTERINE
 KAEMPFEROL SD
 1-MONOGLUCOSIDEMODIN
 PALMIDIN-B FR
 PALMIDIN-C BK 411/
 PHYSCION BK
 RHAMNINASE
 RHAMNOL
 ROBININ SD
 TANNIN BK
 TOCOPHEROL 200 FR

FRAXINUS RHYNCHOPHYLLA HANCE

“CHINESE ASH”

AESCULETIN BK CCO
 AESCULIN BK CCO
 ARSENIC 0.15 BK CAL
 CALCIUM 38,600 BK CAL
 COPPER 6 BK CAL
 FRAXETIN BK CCO
 FRAXIN BK CCO
 IRON 120 BK CAL
 MAGNESIUM 2,070 BK CAL
 MANGANESE 89 BK CAL
 MERCURY 0.09 BK CAL
 POTASSIUM 6,080 BK CAL
 SODIUM 58 BK CAL
 ZINC 17 BK CAL

FRITILLARIA THUNBERGII Miq.

“FRITILLARY; BEI-MU”

APOVERTICINE BU CCO
 ENT-(16S)-ATISAN-13,17-OXIDE BU
 CCO
 CALCIUM 400 BU CAL

CAMPESTEROL BU CCO
 TRANS-COMMUNIC-ACID-METHYL-
 ESTER BU CCO
 TRANS-COMMUNOL BU CCO
 COPPER 12 BU CAL
 ENT-16-ATISAN-13,17-OXIDE PL JSG
 ENT-15,16-EPOXYKAURAN-17-OL PL
 JSG
 ENT-15BETA,16-EPOXY-KAURAN-17-OL
 BU CCO
 ENT-16BETA,17-EPOXY-KAURANE BU
 CCO
 ENT-16BETA-HYDROXY-KAURA-17-YL-
 ENT-15,16-EPOXYKAUR-17-OL PL JSG
 ENT-16BETA-HYDROXY-KAURAN-17-
 YL-ENT-KAUR-15-EN-17-OATE CCO
 ENT-16-HYDROXYKAURAN-17-YL-ENT-
 LAUR-15-EN-17-OATE PL JSG
 FRITILLARINE BU CCO
 FRITILLINE BU CCO
 3-O-BETA-D-
 GLUCOPYRANOSYL-GLUCOPYRANOSIDE
 HAPEPUNINE-3-O-ALPHA-L-RHAMNO...
 GLUCOPYRANOSIDE PL CCO
 IRON 50 BU CAL
 ISOPIMARAN-19-OIC-ACID-METHYL-
 ESTER BU CCO
 ISOPIMARACRAN-19-OL POL JSG
 ENT-KAUR-15-EN-17-OL BU CCO
 ENT-KAURAN-16ALPA,17-DIOL BU
 CCO
 MAGNESIUM 370 BU CAL
 MANGANESE 12 BU CAL
 MERCURY 0.04 BU CAL
 ENT-KAURAN-16BETA,17-DIOL BU
 CCO
 ENT-16ALPHA-METHOXYKAURAN-17-
 OL BU CCO
 ENT-17-NORKAURAN-16-ONE BU CCO
 PEIMIDINE BU CCO
 PEIMINE ST CCO
 PEIMININE BU CCO
 PEIMISINE BU CCO
 PEIMITIDINE BU CCO
 POTASSIUM 5,980 TU CAL
 3-O-ALPHA-L-RHAMNOPYRANOSYL...
 GLUCOPYRANOSIDE RT CCO
 BETA-SITOSTEROL BU CCO
 BETA-SITOSTERYL-BETA-D-
 GLUCOSIDE BU CCO
 SODIUM 396 BU CAL
 STIGMASTEROL BU CCO
 SUCCINIC-ACID BU CCO
 THYMIDINE BU CCO

VERTICILLINE BU CCO
 VERTICINE BU CCO
 VERTICINONE BU CCO
 ZINC 12 BU CAL

FUCUS VESICULOSUS L.
 (AN ALGA)

“BLADDERWRACK”

ALDOBIURONIC-ACID PL
 ALGIN PL PED
 ALGINIC-ACID
 ALUMINUM 631 PL PED
 ARACHIDONIC-ACID PL PED
 ARSENIC 68 PL PED
 ASCORBIC-ACID 258 PL PED
 BROMINE 150
 CALCIUM 30,400 PL PED
 CARBOHYDRATES 655,000 PL PED
 BETA-CAROTENE 39.6 PL PED
 CHLOROPHYLL
 CHOLESTEROL PL PED
 CHROMIUM 7 PL PED
 COBALT 16 PL PED
 FAT 30,000 PL PED
 FIBER 98,000 PL PED
 FUCINIC-ACID 1,000
 FUCOIDIN (POLYSACCHARIDE)
 600,000
 FUCOL PL 411/
 FUCOPHORETHOLS PL 411/
 FUCOSE 240,000
 FUCOSTEROL PL PED
 GLUCURONOXILOFUCAN
 HENEICOSA-1,6,9,12,15,18-HEXAEN
 HENEICOSA-1,6,9,12,15-PENTAEN
 N-HENTRIACONTANE
 IODINE 300-5,400 PL PED
 IRON 150 PL PED
 KILOCALORIES 2,490 PL PED
 LAMINARIN
 LAURIC-ACID PL PED
 LEAD 91 PL PED
 LUTEIN
 MAGNESIUM 8,670 PL PED
 MANGANESE 76 PL PED
 D-MANNITOL
 MANNITOL-DIGLUCOSIDE
 MANNITOL-MONOACETATE
 MANNITOL-MONOGLUCOSIDE
 MERCURY 40 PL PED
 MUCILAGE
 NIACIN 47 PL PED

MYRISTIC-ACID PL PED
 OLEIC-ACID PL PED
 PALMITIC-ACID PL PED
 4-(2",4",6"-TRIHYDROXYPHENOXY) -
 2,2',4',6,6'-PENTAHYDROXYBIPHENYL
 PL JSG
 4-(2",4",6"-TRIHYDROXYPHENYL)-
 4",6"DIHYDROXYPHENOXY
 -2,2',4',6,6'-
 PENTAHYDROXYBIPHENYL PL JSG
 PHLOROGLUCINOL PL 411/
 PHOSPHORUS 2,490 PL PED
 PHYTOL
 POTASSIUM 21,100 PL PED
 PRISTANE
 PROTEIN 65,000 PL PED
 RIBOFLAVIN 0 PL PED
 SELENIUM 17 PL PED
 SILICON 76 PL PED
 BETA-SITOSTEROL PL PED
 SODIUM 56,100 PL PED
 SQUALENE
 STEARIC-ACID PL PED
 THIAMIN 0 PL PED
 TIN 24 PL PED
 VIOLAXANTHIN
 XANTHOPHYLL
 ZEAXANTHIN
 ZINC 6 PL PED

GALEOPSIS TETRAHIT L.

"HEMP NETTLE"

CARYOPHYLLENE 40 SH BML
 CARYOPHYLLENE-OXIDE 128 SH BML
 COPAENE 5 SH BML
 EO 400 SH BML
 GALIROSIDE PL JSG
 GERMACRENE-D 22 SH BML
 GLUROSIDE PL JSG
 ALPHA-HUMULENE 6 SH BML
 LINALOOL 12 SH BML
 3-OCTANOL 4 SH BML

GALIPEA OFFICINALIS HAN.

"ANGOSTURA"

2-N-AMYLQUINOLINE
 ANGOSTURINE LF
 CADINENE EO 411/
 CUSPAREINE PL JSG
 CUSPARIDINE
 CUSPAREINE
 CUSPARINE 106 PL JSG

EO 10,000-20,000 BK 411/
 GALIPENE EO 411/
 GALIPIDINE PL JSG
 GALIPINE 35 PL
 GALIPOIDINE
 GALIPOL
 GALIPOLIDINE PL 411/
 GALIPOLINE PL JSG
 L-CADINENE
 4-METHOXY-2N-AMYLQUINOLINE
 N-METHYLQUINOLINE-(2)
 PINENE
 QUINALDINE PL 411/
 QUINOLINE C₉H₇N
 VIT B₁ 11.3

GALIUM ODORATUM (L.) SCOP.

"WOODRUFF; WALDMEISTER"

ANTHRACENE-DERIVATIVES PL AYL
 ANTHRAQUINONES PL 411/
 ASPERULOSIDE 500 PL AYL
 CITRIC-ACID PL CRC
 COUMARIN 7,000-13,000 PL ABS 1/
 EMULSIN 430,000-450,000 PL WBB
 MALIC-ACID PL CRC
 MONOTROPEIN PL AYL
 NAPHTHALENE-DERIVATIVES PL AYL
 NICOTINIC-ACID TR PL AYL
 NICOTINIC-ACID-AMIDE PL HHB
 RUBRICHLORIC-ACID PL CRC
 TANNIC-ACID PL CRC
 TANNIN PL HHB

1/ Reports disputed. Coumarin may be
 formed in drying (AYL). Laub et al(1982)
 report 7,000-13,000 ppm in fresh herb,
 suggesting it decreases on drying (ABS)

GARCINIA HANBURYI HOOK. f.

"GAMBOGE"

GAMBOGIC-ACID RE CRC
 GARCINOLIC-ACIDS RE CRC
 GUM RE CRC
 NEOGAMBOGIC-ACID RE 411/
 RESIN PL CRC

GARDENIA JASMINOIDES ELLIS

"GARDEN; SHAN-CHIH-TZU;
 SHAN-ZHI-ZI"

10-ACETYLGENIPOSIDE FR CCO
 ARSENIC 0.05 FR CAL

ASH 25,000 SD CRC
 BENZOIC-ACID-ESTER FL WOI
 BENZYL-ACETATE FL WOI
 CALCIUM 2,810-4,710 FR CAL SMO
 CHLOROGENIN FR WOI
 COPPER 10-13 FR CAL SMO
 CROCIN FR CCO
 CROCIN-1 FR CCO
 DEACETYLASPERULOSIDE-ACID-METHYL-ESTER FR HHB
 EO 700 FL WOI
 FAT 140,000-200,000 SD CCO CRC
 GARDENIN FR CCO
 GARDENOSIDE FR LF CCO
 GARDOSIDE FR CCO
 GENIPIN FR CCO
 GENIPIN-1-BETA-D-GENTIOBIOSIDE FR HHB
 GENIPIN-1-BETA-D-GLUCOSIDE PL JSG
 GENIPOSIDE FR LF CCO
 GENIPOSIDIC-ACID FR CCO
 GENTIOBIOSIDE FR CCO
 IRON 40-130 FR CAL SMO
 LINALOOL FL WOI
 LINALYL-ACETATE FL WOI
 MAGNESIUM 1,880-2,170 FR CAL SMO
 MANGANESE 16-19 FR CAL SMO
 MANNITOL FR CCO
 METHYL-ANTHRANILATE FL WOI
 METHYL-DEACETYLASPERULOSIDATE FR CCO
 NONACOSANE FR CCO
 PECTIN FR CCO
 PICROCROCINIC-ACID FR CCO
 POTASSIUM 13,800-15,300 FR CAL SMO
 PROTEIN 144,000 SD CRC
 SCANDOSIDE-METHYL-ESTER FR CCO
 SHANZHISIDE FR CCO
 BETA-SITOSTEROL FR CCO
 SODIUM 731-985 FR CAL SMO
 STYRENE-ACETATE FL WOI
 TANNIN FR CCO
 TERPINEOL FL WOI
 ZINC 10-17 FR CAL SMO

GASTRODIA ELATA BLUME

“TIAN MA”

ARSENIC 0.07 RH CAL
 BIS-(4-HYDROXYBANZYL)-ETHER 39 TU CCO

CALCIUM 2,140 RH CAL
 COPPER 4 RH CAL
 GASTRODIOSIDE 26 TU CCO
 4-BETA-D-GLUCOPYRANOSYLOXYBENZYL-ALCOHOL 1,460 TU CCO
 4-HYDROXYBENZALDEHYDE 270 TU CCO
 4-HYDROXYBENZYL-ALCOHOL 210 TU CCO
 4-HYDROXYBENZYL-METHYL-ETHER 54 TU CCO
 4-(4'-HYDROXYBENZYLOXY)-BENZYL-METHYL-ETHER 27 TU CCO
 IRON 40 RH CAL
 MAGNESIUM 590 RH CAL
 MANGANESE 26 RH CAL
 MERCURY 0.01 RH CAL
 MUCILAGE RH CCO
 PARISHIN 410 TU CCO
 POTASSIUM 12,900 RH CAL
 SODIUM 228 RH CAL
 VANILLIN RH CCO
 VANILLYL-ALCOHOL TU DAA
 ZINC 12 RH CAL

GAULTHERIA PROCUMBENS L.

“TEABERRY”

“WINTERGREEN”

ARBUTIN LF HHB
 EO 5,500-8,000 LF HHB
 CAFFEIC-ACID LF HHB
 P-COUMARIC-ACID LF HHB
 ERICOLIN LF HHB
 FERULIC-ACID LF HHB
 GALLIC-ACID PL CRC
 GAULTHERASE LF HHB
 GAULTHERIC-ACID LF CRC
 GAULTHERIN LF HHB
 GENTISINIC-ACID LF HHB
 P-HYDROXYBENZOIC-ACID LF HHB
 METHYL-SALICYLATE 5,445-7,920 LF HHB
 PRIMVEROSE LF HHB
 PROTOCATACHUIC-ACID LF HHB
 O-PYROCATACHUIC-ACID LF HHB
 SYRINGIC-ACID LF HHB
 TANNIC-ACID LF HHB
 TANNIN LF
 TRIACONTANE LF HHB
 VANILLIC-ACID LF HHB

GELSEMIUM SEMPERVIRENS (L.)
AIT.

“YELLOW JESSAMINE”

BRASOSIDE RT 411/
FABIATIN RT 411/
EMODIN-MONOMETHYLETHER RT
HHB
EO 5,000 RT HHB
GELSEDINE RT ALK
GELSEMICINE RT ALK
GELSEMIDE RT 411/
GELSEMIDE-7-GLUCOSIDE RT 411/
GELSEMIDINE RT ALK
GELSEMINE RT ALK
GELSEMININE RT ALK
GELSEMIOL RT 411/
GELSEMIOL-1-GLUCOSIDE RT 411/
GELSEMIOL-3-GLUCOSIDE RT 411/
GELSEVIRINE RT ALK
9-HYDROXYSEMPEROSIDE RT 411/
IPURANOL RT ALK
1-METHOXY-GELSEMINE PL JSG
N-PENTATRIACONTANE RT HHB
SCOPOLETIN RT HHB
SEMPERVIRINE RT ALK
SEMPEROSIDE PL JSG
TANNIN RT 411/

GENIPA AMERICANA L.

“GENIPAP”

“JAGUA”

ALUMINUM 4-20 FR JAD
ALUMINUM 20 SD JAD
ASCORBIC-ACID 330-1,020 FR JAD JFM
ASH 2,000-37,000 FR JAD JFM
BORON 14 FR JAD
BORON 15 SD JAD
CAFFEINE SD JAD
CALCIUM 400-3,700 FR JAD JFM
CALCIUM 900 SD JAD
CARBOHYDRATES? 112,000-793,200 FR
JAD JFM
COPPER 1-<5 FR JAD
COPPER <5 SD JAD
FAT 3,000-9,250 FR JAD JFM
FIBER 94290,120 FR JAD JFM
GENIPIC-ACID FR JNP54:1677
GENIPIN FR JNP54:1677
GENIPINIC-ACID FR JNP54:1677
GENIPOSIDE LF JNP54:1677

GENIPOSIDIC-ACID LF JNP54:1677
GLYCERIDES? 257,000-793,200 FR JAD
JFM

IRON 10-160 FR JAD JFM
IRON 100 SD JAD
KILOCALORIES 1,130-3,485 FR JAD JFM
MAGNESIUM 250-2,900 FR JAD
MAGNESIUM 1,500 SD JAD
MANGANESE 1-<5 FR JAD
MANGANESE 6 SD JAD
MALIC-ACID 6,300 FR JFM
NIACIN 5-15 FR JAD JFM
NITROGEN 13,900 FR JAD
NITROGEN 11,100 SD JAD
PHOSPHORUS 580-3,000 FR JAD JFM
PHOSPHORUS 2,200 FR JAD JFM
POTASSIUM 22,900 FR JAD
POTASSIUM 9,400 SD JAD
PROTEIN 5,000-160,500 FR JAD JFM
RIBOFLAVIN 0.4-1.2 FR JAD JFM
SODIUM 50-250 FR JAD
SODIUM 165 SD JAD
SUGARS 43,000-132,000 FR JAD JFM
SULFUR 140-2,000 FR JAD
SULFUR 1,300 SD JAD
TANNIN FR JFM
THIAMIN 0.4-1.2 FR JAD JFM
WATER 676,000 FR JAD JFM
ZINC 3-14 FR JAD
ZINC 16 SD JAD

GENISTA TINCTORIA L.

“DYER’S BROOM”

ALKALOIDS 3,000 SH HHB
ANAGYRINE SH CRC
CYTISINE SH HHB
DAIDZEIN SH 411/
EO 300 SH CRC
GENISTEIN FL ALK
GENISTEIN-7-O-GLUCOSIDE PL 411/
GENISTIN PL HHB
ISOPARTEINE SH ALK
LUPANINE SH ALK
LUTEOLIN-5,7-DIGLUCOSIDE PL HHB
LUTEOLIN-5-GLUCOSIDE PL HHB
LUTEOLIN-7-BETA-D-
GLUCOPYRANOSIDE PL HHB
N-METHYL-CYTISINE SH ALK
(-)-(7R,9R,11R-7-N-METHYL-11(PROP-2-
ENYL)CYTISINE SH HHB
MUCILAGE PL HHB
TANNIN PL HHB

THERMOPSINE LF ALK
TINCTORINE PL CRC

GENTIANA ACAULIS L.

"STEMLESS GENTIAN"

GENTIACAULIN 9,200-12,500 ST HHB
GENTIACAULIN 15,300-24,700 RT HHB
GENTIACAULOSIDE RT AYL
GENTISIN RT AYL
P-OXYCINNAMOYLDELPHINIDIN-
MONOGLUCOSIDE FL HHB

GENTIANA LUTEA L.

"YELLOW GENTIAN"

ALUMINUM 291 RT PED
AMAROGENTIN 500 RT ABS HHB
ASCORBIC-ACID 183 RT PED
ASH 82,000 RT PED
CAFFEIC-ACID RT 411/
CALCIUM 8,140 RT PED
CARVACROL EO ABS
CHROMIUM 13 RT PED
COBALT 14 RT PED
FAT 260,000 SD CRC
GENTIAMARIN RT CRC
GENTIALUTINE RT HHB
GENTIANINE 6,000-8,000 RT CRC HHB
GENTIANOSE RT HHB
GENTIIN RT CRC
GENTIOBIOSE RT HHB
GENTIODISE RT CRC
GENTIOFLAVOSIDE RT HHB
GENTIOPICRIN 11,400-35,000 RT HHB
GENTIOSIDE RT HHB
GENTISEIN RT HHB
GENTISIC-ACID RT 411/
GENTISIN RT HHB
1-HYDROXY-3,7-
DIMETHOXYXANTHONE RT HHB
INULIN RT HHB
IRON 370 RT PED
ISOGENTISIN RT HHB
LIMONENE (34.68%EO) ABS
LINALOOL EO ABS
CIS-LINALYL-OXIDE
MAGNESIUM 2,740 RT PED
MANGANESE 23 RT PED
MANGIFERIN PL ABS
NIACIN 61 RT PED
NICOTINIC-ACID RT HHB
NICOTINIC-ACID-AMIDE RT HHB
OXYCINNAMIC-ACID RT HHB

PECTIN RT HHB
PHOSPHORUS 2,700 RT PED
POTASSIUM 8,770 RT PED
1-O-PRIMVEROSYL-7-OXY-3-
METHOXYXANTHONE RT HHB
7-O-PRIMVEROSYL-1-OXY-3-
METHOXYXANTHONE RT ABS
PROTEIN 138,000 RT PED
PROTEIN 310,000 SD CRC
PROTocatechuic-ACID RT 411/
RIBOFLAVIN 2.1 RT PED
SACCHAROSE RT HHB
SELENIUM 18 RT PED
SINAPIC-ACID RT 411/
SODIUM 41 RT PED
SUCROSE RT HHB
SWERTIAMARIN RT AYL
SYRINGIC-ACID RT 411/
ALPHA-TERPINEOL EO ABS
2,3',4,6-TETRAHYDROXYBENZO-
PHENONE RT HHB
THIAMIN 48 RT PED
TIN 40 RT PED
1,3,7-TRIMETHOXYXANTHONE RT
HHB
WATER 834,000 RT PED
ZINC 29 RT PED

GENTIANA SCABRA BUNGE

"JAPANESE GENTIAN"

ARSENIC 1.06 RT CAL
CALCIUM 7,490 RT CAL
COPPER 18 RT CAL
GENTIANINE 500 RT HHB
GENTIANOSE RT CCO
GENTIOBIOSE RT CCO
GENTIOPICRIN RT CCO
GENTIOPICROSIDE PL JSG
GENTISIC-ACID RT CCO
GENTISIN RT CCO
IRON 910 RT CAL
MAGNESIUM 1,150 RT CAL
MANGANESE 98 RT CAL
POTASSIUM 8,980 RT CAL
SODIUM 140 RT CAL
SWERTIAMARIN RT CCO
ZINC 18 RT CAL

GERANIUM MACULATUM L.

"CRANESBILL"

CALCIUM-OXALATE PL CRC
GALLIC-ACID RT CRC

GUM PL CRC
RESIN PL CRC
TANNINS 100,000-280,000 RT CRC

GERANIUM THUNBERGII SIEB.
& ZUCC

“ORIENTAL GERANIUM;
GENNOSHIOUKO”

BREVIFOLIN LF CCO
CALCIUM 16,900 PL SMO
(+)-CATECHIN TC PC30:501
COPPER 23 PL SMO
CORILAGIN LF CCO
ELAEOCARPUSIN PL JSG
ELLAGIC-ACID LF CCO
ELLAGITANNIN LF CCO
ETHER-CORILAGIN LF CCO
GALLIC-ACID LF CCO
GERANIIN LF CCO
IRON 400 PL SMO
KAEMPFERITRIN LF CCO
KAEMPFEROL LF CCO
MAGNESIUM 1,660 PL SMO
MANGANESE 49 PL SMO
MONORHAMNOSIDE LF CCO
NONAMETHYL-CORILAGIN LF CCO
PENTAGALLOYLGLUCOSE TC
PC30:501
PHYLLANTHUSIN-D TC PC30:501
POTASSIUM 14,900 PL SMO
PROCYANIDIN-B3 TC PC30:501
PROTocatechuic-ACID LF CCO
PYROGALLOL LF CCO
QUERCETIN LF CCO
SODIUM 58 PL SMO
SUCCINIC-ACID PL CCO
TANNIN 50,000 PL CCO
TANNIN 200,000 LF CCO
UNDECAACETATE-CORILAGIN LF CCO
ZINC 28 PL SMO

GINKGO BILOBA L.

“MAIDENHAIR TREE; GINKGO”

ACACETIN LF WOI
ACENAPTHENE WD 1/
ACETIC-ACID FR HHB
AFZELIN PO CCO
ALANINE 2,400-5,352 SD USA
AMENTOFLAVONE LF 1/
GAMMA-AMINOBUTYRIC-ACID SD 1/
ANACARDIC-ACID FR 1/

APIGENIN LF WOI
ARABINOSE WD 1/
ARGININE 4,200-9,366 SD USA
ASCORBIC-ACID 150-545 SD CRC USA
ASH 14,000-38,000 SD CRC
ASPARAGINE FR CCO
ASPARTIC-ACID 5,430-12,109 SD USA
BETULAPRENOLS PL 1/
BILOBALIDE LF HHB
BILOBANONE 20,000 WD HHB
BILOBETIN LF HHB
BILOBOL FR CCO
BUTYRIC-ACID FR HHB
CALCIUM 20-109 SD CRC USA
CALCIUM-OXALATE LF 1/
CAPROIC-ACID FR 1/
CAPRYLIC-ACID FR HHB
CARBOHYDRATES 381,000-838,400 SD
CRC USA
CARDANOL FR 1/
CARDOL FR 1/
BETA-CAROTENE 1-4 SD CRC USA
D-CATECHIN LF HHB
CERYL-ALCOHOL TW HHB
CITRIC-ACID SD 1/
COPPER 3-6 SD USA
P-COUMARIC-ACID PO CCO
P-CYME NE WD 1/
CYSTEINE SD 1/
CYSTINE 230-513 SD USA
10,11-(E)-DIHYDROATLANTONE PL JSG
10,11-(Z)-DIHYDROATLANTONE PL JSG
1,4-DIMETHYL-2,5-
DIISOPROPYLBENZENE WD 1/
DNA 32,700-35,700 FL(MALE) WOI
DOCOSANOL PO CCO
ELEMOL WD 1/
EO 50,000 WD HHB
L-EPICATECHIN LF HHB
L-EPIGALLOCATECHIN LF 1/
24ALPHA-ETHYLLATHOSTEROL PL
JSG
BETA-EUDES MOL WD 1/
GAMMA-EUDES MOL WD 1/
FAT 16,000-38,020 SD CRC USA
FIBER 5,000-13,000 SD CRC USA
FORMIC-ACID FR HHB
FRUCTOSE SD 1/
GADOLEIC-ACID 100-223 SD USA
GALACTOSE WD 1/
D-GALLOCATECHIN LF HHB
GINKGETIN FR LF CCO
GINKGOL FR HHB
GINKGOLIC-ACID FR CCO

- GINKGOLIDE-A RT BK CCO
 GINKGOLIDE-ACID FR 1/
 GINKGOLIDE-B RT BK CCO
 GINKGOLIDE-C RT BK CCO
 GINKGOLIDE-M RT BK CCO
 GINNOL FR CCO
 GINNOL LF 1/
 D-GLUCARIC-ACID LF 1/
 GLUCOMANNAN WD 1/
 GLUCOSE WD 1/
 GLUTAMIC-ACID 8,360-18,643 SD USA
 GLYCINE 2,320-5,174 SD USA
 10-HEPTACOSANOL LF WX CCO
 HEXACOSANOL-1 LF HHB
 ALPHA-HEXENAL LF HHB
 HISTIDINE 1,020-2,275 SD USA
 HOMOSERINE SD 1/
 HYDROGINKGOLIC-ACID FR CCO
 4-HYDROXYANACARDIC-ACID FR 1/
 4-HYDROXYGINKGOLIC-ACID FR 1/
 6-HYDROXYKYNURENIC-ACID LF 1/
 ALPHA-IONONE WD 1/
 BETA-IONONE WD 1/
 IPURANOL LF WOI
 IRON 10-26 SD CRC USA
 ISOGINKGETIN LF HHB
 ISOLEUCINE 2,090-4,661 SD USA
 2-ISOPROPYLPHENOL WD 1/
 ISORHAMNETIN LF 1/
 KAEMPFEROL LF HHB
 KAEMPFEROL-3-O-ALPHA(6''')-P-
 COUMAROYL-GLUCOSYL-BETA-1,4-
 RHAMNOSIDE)
 KAEMPFEROL-3-RHAMNOGLUCOSIDE
 LF HHB
 KAEMPFEROL-3-RUTINOSIDE LF 1/
 LEUCINE 3,160-7,047 SD USA
 TRANS-LINALOOL-OXIDE WD 1/
 LINOLEIC-ACID 5,780-12,889 SD USA
 ALPHA-LINOLENIC-ACID 210-468 SD
 USA
 LUTEOLIN LF HHB
 LYSINE 2,060-4,594 SD USA
 MAGNESIUM 270-602 SD USA
 MANGANESE 1-3 SD USA
 MANNAN 34,000 LF HHB
 MANNOSE WD 1/
 METHIONINE 550-1,226 SD USA
 5'-METHOXYBILOBETIN LF CCO
 4'-METHOXYPYRIDOXINE SD 1/
 3'-O-METHYLMYRICETIN-3-
 RUTINOSIDE LF 1/
 MYRISTIC-ACID 60-133 SD USA
 NIACIN 28-134 SD CRC USA
 NONACOSANE LF HHB
 10-NONACOSANOL LF HHB
 13-NONACOSANOL LF CCO
 OCTACOSANOL-1 LF HHB
 OLEIC-ACID 5,120-11,418 SD USA
 10,11-(E)-6-OXO-DIHYDROATLANTONE
 PL 1/
 PALMITIC-ACID 2,880-6,422 SD USA
 PALMITOLEIC-ACID 790-1,761 SD USA
 PANTOTHENIC-ACID 1-4 SD USA
 6-(PENTADEC-8-ENYL)-2,4-
 DIHYDROXYBENZOIC-ACID PL JSG
 Z,Z,4,4'-(1,4-PENTADIEN-1,5-
 DIYL)DIPHENOL LF 1/
 PENTOSANS 55,000 LF HHB
 PENTOSANS 16,000 SD HHB
 PHENYLALANINE 1,710-3,813 SD USA
 PHOSPHORUS 1,240-3,268 SD CRC USA
 PINITOL LF HHB
 POPULNIN PL HHB
 POTASSIUM 5,100-11,394 SD CRC USA
 PROCYANIDIN LF 1/
 PRODELPHINIDIN LF 1/
 PROLINE 3,470-7,738 SD USA
 PROPIONIC-ACID FR HHB (?)
 PROTEIN 43,200-131,000 SD CRC HHB
 USA
 QUERCETIN LF HHB
 QUERCETIN-3-O-ALPHA(6''')-P-
 COUMAROYL-GLUCOSYL-BETA-1,4-
 RHAMNOSIDE)
 QUERCETIN-3-RHAMNOGLUCOSIDE LF
 HHB
 QUERCETIN-3-RUTINOSIDE LF 1/
 QUINIC-ACID LF HHB
 RAFFINOSE 40,000 FL(MALE) WOI
 RAFFINOSE 10,000-20,000 WD 1/
 RIBOFLAVIN 1-3 SD CRC USA
 SCIADOPITYSIN LF CCO
 SEQUOYITOL LF HHB
 SERINE 2,900-6,467 SD USA
 ALPHA-SESAMIN 5,000 WD HHB
 SHIKIMIC-ACID LF HHB
 SITOSTEROL LF HHB
 SODIUM 70-160 SD CRC USA
 SPINASTEROL PL JSG
 STARCH 407,400-680,000 SD HHB WOI
 STEARIC-ACID 160-357 SD USA
 STIGMASTEROL PO CCO
 SUCCINIC-ACID LF 1/
 SUCROSE 10,000-20,000 WD HHB
 SUCROSE 3,600 SD WOI
 TANNIN LF 411/
 THIAMIN 2-5 SD USA

THREONINE 2,680-5,976 SD USA
 THYMOL WD 1/
 P-TOLYL-PROPYLENE WD 1/
 TRICETIN LF 1/
 2,5,8-TRIMETHYLDIHYDRONAPH-
 THALENE WD 1/
 TRYPTOPHAN 710-1,583 SD USA
 TYROSINE 610-1,360 SD USA
 UROSHIOLS LF 411/
 VALERIANIC-ACID FR HHB
 VALINE 2,830-6,311 SD USA
 WAX 10,000 LF HHB
 XYLOSE WD 1/
 ZINC 3-8 SD USA

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 S.A., Barcelona.

GLAUCIUM FLAVUM CRANTZ

“HORNED POPPY”

ALPHA-ALLOCRYPTOPINE RT ALK
 AROSINE PL JSG
 AROSININE PL JSG
 AUROTENSINE PL ALK
 CATALINE PL HHB
 CHELERYTHRINE RT ALK
 CHELIDONINE PL ALK
 CHELIRUBINE RT ALK
 CORUNNINE PL HHB
 CORYDINE PL ALK
 DEHYDROGLAUCINE PL JSG
 DIMETHYLGLAUCINE PL HHB
 DIOXYMALEIC-ACID PL HHB
 FAT 300,000-350,000 SD HHB
 FUMARIC-ACID PL HHB
 GLAUCENTRINE PL ALK
 GLAUCINE PL ALK
 GLAUFLAVINE PL HHB
 GLAUVINE PL HHB
 6-IMINOSANGUINARINE PL JSG
 ISOBOLDINE PL JSG
 ISOCORYDINE RT HHB
 MAGNOFLORINE RT ALK
 O-METHYLATHEROLINE PL JSG
 NORCHELIDONINE RT ALK
 PONTEVEDRINE PL HHB
 PROTOPINE RT ALK
 SANGUINARINE RT ALK
 SANGUINARINE SD ALK
 SCOULERINE PL ALK
 SINACTINE PL JSG

GLECHOMA HEDERACEA L.

“ALEHOOF”

APIGENIN PL POT
 ARSENIC ND PL CPB38:2205
 ASIATIC-ACID PL CCO
 ASPARAGIC-ACID PL CRC
 ASPARTIC-ACID PL CCO
 BARIUM 45-89 PL CPB38:2205
 BORNEOL 1-5 PL BML
 BORNYL-ACETATE 1-4 PL BML
 BETA-BOURBONENE 1-6 PL BML
 BROMINE 18-19 PL CPB38:2205
 EPSILON-BULGARENE 2-11 PL BML
 ALPHA-CADINOL 1-6 PL BML
 CAFFEIC-ACID PL JLS58:156
 CALCIUM 21,000-23,000 PL CPB38:2205
 CAMPHENE 1-3 PL BML
 CHLORINE 8,000-11,00 PL CPB38:2205
 CHOLINE PL POT
 CHROMIUM 3-4 PL CPB38:2205
 1,8-CINEOLE 6-37 PL BML
 COPPER 11 PL CPB38:2205
 P-COUMARIC-ACID PL JLS58:156
 P-CYMENE PL CCO
 BETA-ELEMENE 9-53 PL BML
 GAMMA-ELEMENE 1-7 PL BML
 ELEMOL 1-3 PL BML
 EO 100-600 PL BML POT
 FERULIC-ACID PL JLS58:156
 GERMACRENE-B 14-83 PL BML
 GERMACRENE-D 20-116 PL BML
 GLECHOMAFURAN PL POT
 GLECHOMINE PL POT
 GLUTAMIC-ACID PL OMM
 HYPEROSIDE PL POT
 IODINE ND PL CPB38:2205
 IRON 290-500 PL CPB38:2205
 ISOFURANOGERMACRENE 1 PL BML
 ISOMENTHONE PL CCO
 ISOPINOCAMPHONE PL CCO
 ISOQUERCITIN PL POT
 LEAD ND PL CPB38:2205
 LIMONENE 1-6 PL BML
 LINALOOL 1-4 PL BML
 LUTEOLIN PL POT
 MANGANESE 82-100 PL CPB38:2205
 MARRUBIIN PL CRC
 MENTHOL PL CCO
 L-MENTHONE PL OMM
 MOLYBDENUM ND PL CPB38:2205
 EPSILON-MUUROLENE 1-6 PL BML
 MYRCENE 3-20 PL BML

MYRTENAL 1-1 PL BML
 NICKEL ND PL CPB38:2205
 CIS-OCIMENE 9-55 PL BML
 3-OCTANOL 1-2 PL BML
 3-OCTANONE 3-16 PL BML
 1-OCTEN-3-OL 1-7 PL BML
 1-OCTEN-3-YL-ACETATE 1-2 PL BML
 OLEANOLIC-ACID 360 PL ABS
 PALMITIC-ACID PL CCO
 PHOSPHORUS 2,100-3,500 PL
 CPB38:2205
 ALPHA-PINENE PL OMM
 BETA-PINENE 3-17 PL BML
 L-PINOCAMPHONE PL OMM
 POTASSIUM 32,000-46,000 PL
 CPB38:2205
 POTASSIUM-NITRATE PL OMM
 PROLINE PL CRC
 L-PULEGONE PL CCO
 RESIN PL POT
 ROSMARINIC-ACID 25,000 LF FT62:166
 RUBIDIUM 10-11 PL CPB38:2205
 RUTIN PL CRC
 SABINENE 1-9 PL BML
 SAPONIN PL POT
 BETA-SITOSTEROL PL OMM
 STRONTIUM 51-110 PL CPB38:2205
 SUCCINIC-ACID PL OMM
 SULFUR 3,100-3,400 PL CPB38:2205
 TANNIN PL POT
 TERPINEN-4-OL 1-8 PL BML
 ALPHA-TERPINEOL 1-7 PL BML
 TITANIUM 24-50 PL CPB38:2205
 TYROSINE PL OMM
 URSOLIC-ACID 166 PL CCO
 VALINE PL OMM
 ZINC 46-53 PL CPB38:2205

GLEDITSIA TRIACANTHOS L.

“HONEY LOCUST”

ACETIC-ACID SD CRC
 ACRAMMERIN LF CRC
 ALKALOID 2,000 FL CRC
 ASH 54,000 FR CRC
 ASH 38,000-40,000 SD CRC
 CALCIUM 2,800 SD CRC
 CARBOHYDRATES 669,000-969,000 FR
 CRC
 CARBOHYDRATES 847,000 SD CRC
 (+)-CATECHIN FR HHB
 5-(3,4-DIHYDROXYCINNAMOYL)-(-)-
 QUINIC-ACID SH HHB

DIHYDROXY-4-METHOXY-
 ISOFLAVONE FR CRC
 DIHYDROXYSTEARIC-ACID SD
 CRC
 (-)-EPICATECHIN-3-GLUCOSIDE
 FR HHB
 EPICATECHOL-3-D-GLUCOSIDE-
 DIHYDRIATE 19,000 SD CRC
 FAT 46,000 FR CRC
 FAT 8,000-30,000 SD CRC HHB
 FIBER 127,000 FR CRC
 FIBER 211,000 SD CRC
 FISETIN WD HHB
 FUSTIN WD HHB
 GALACTOSE SD CRC
 GLEDITSCHIOSIDES PL JSG
 GLUCOSE 39,000-44,400 FR CRC
 GLUCURONIC-ACID RE HHB
 HYPOXYSIN LF CRC
 LEUCOCYANIDIN FR HHB
 MANNOGALACTAN SD CRC
 MANNOSE SD CRC
 N-METHYL-BETA-
 PHENYLETHYLAMINE LF HHB
 OLMELIN LF CRC
 PHLOBAPHENE SD CRC
 PHOSPHORUS 3,200 SD CRC
 PROTEIN 231,000 FR CRC
 PROTEIN 210,000 SD CRC
 QUERCETIN-DIGLUCOSIDE FR
 HHB
 SATIVIC-ACID SD CRC
 TANNIN LF CRC
 7,3',4',5'-TETRAHYDROXYISO-
 FLAVANOL SD CRC
 TETRAHYDROXYSTEARIC-ACID
 SD CRC
 TOCOPHEROLS 40 SD CRC
 TRIACANTHINE 5,000 LF CRC HHB
 TRIACANTHOSIDES PL JSG
 TYRAMINE LF HHB

GLEHNNIA LITTORALIS

F.SCHMIDT & MIQUEL

“BEI SHA SHEN”

ALLOISOIMPERATORIN RH RT
 CCO
 BERGAPTEN RH RT CCO
 BERGAPTIN RH RT CCO
 CALCIUM 1,930 RT SMO
 CNIDILIN RH RT CCO
 COPPER 15 RT SMO

8-(1,1-DIMETHYLALLYL)-5-
HYDROXYPSORALEN RH RT CCO
7-O-(3,3-DIMETHYLALLYL)-
SCOPOLETIN RH RT CCO
8-GERANYLOXYPSORALEN RH RT
CCO
IMPERATORIN RH RT CCO
IRON 820 RT SMO
MAGNESIUM 1,650 RT SMO
MANGANESE 70 RT SMO
MARMESIN RH RT CCO
OSTHENOL-7-O-BETA-GENTIOBIOSIDE
RH RT CCO
PHELLOPTERIN RH RT CCO
POTASSIUM 13,900 RT SMO
PSORALEN RH RT CCO
SCOPOLETIN RH RT CCO
SODIUM 425 RT SMO
XANTHOTOXIN RH RT CCO
XANTHOTOXOL RH RT CCO
ZINC 26 RT SMO

GLIRICIDIA SEPIUM STEUD.

"MATA RATON"

ASCORBIC-ACID 120-785 LF CRC
ASCORBIC-ACID 440-3,145 LF CRC
ASH 6,000-69,000 FL CRC
ASH 5,000-33,000 LF CRC
ASH 35,000 SD CRC
BUTIN-2 WD JFM
CALCIUM 220-1,570 FL CRC
CALCIUM 170-1,110 LF CRC
CARBOHYDRATES 84,000-771,000 FL
CRC
CARBOHYDRATES 119,000-778,000 LF
CRC
CARBOHYDRATES 34,000 SD CRC
BETA-CAROTENE 0.7-5 FL CRC
FAT 2,000-103,000 FL CRC
FAT 5,000-33,000 LF CRC
FAT 161,000-204,000 SD CRC
FIBER 16,000-166,000 FL CRC
FIBER 13,000-85,000 LF CRC
GLIRICIDIN-6A WD JFM
GLIRICIDOL-9A WD JFM
IRON 18-129 FL CRC
IRON 8-52 LF CRC
KILOCALORIES 460-3,290 FL CRC
KILOCALORIES 520-3,400 LF CRC
2'-O-METHYLSEPIOL PL JSG
NIACIN 6-43 FL CRC
NIACIN 10-65 LF CRC

PHOSPHORUS 370-2,645 FL CRC
PHOSPHORUS 340-2,220 LF CRC
PROTEIN 24,000-171,000 FL CRC
PROTEIN 24,000-157,000 LF CRC
PROTEIN 538,000 SD CRC
RIBOFLAVIN 0.8-6 FL CRC
RIBOFLAVIN 0.8-5 LF CRC
ROBINETIN WD CCO
SEPINOL-7A WD JFM
SEPIOL PL JSG
THIAMIN 1.1-8 FL CRC
THIAMIN 1.4-9 LF CRC
7,3',4'-TRIHIDROXYFLAVANONE PL
JSG
WATER 855,000-860,000 FL CRC
WATER 847,000 LF CRC
WATER 132,000 SD CRC

GLORIOSA SUPERBA L.

"GLORY LILY"

BENZOIC-ACID BU HHB
CHOLINE BU HHB
CHRYSOPTANIC-ACID BU HHB
COLCHICINE BU ALK
DEMETHYLCOLCHICINE BU ALK
2-DEMETHYLCOLCHICINE BU ALK
2-DEMETHYLLUMICOLCHICINE PL JSG
3-DESMETHYLCOLCHICINE LF CRC
O=DESMETHYL-N-FORMYL-
DESACETYL-BETA-LUMICOLCHICINE
BU HHB
O-DESMETHYLLUMICOLCHICINE BU
HHB
N-FORMYL-DESACETYLCOCHICINE
BU CRC
N-FORMYL-DESACETYL-BETA-
LUMICOLCHICINE BU HHB
N-FORMYL-DESACETYL-GAMMA-
LUMICOLCHICINE BU HHB
GLORIOSINE BU CRC
GLORIOSOL BU CRC
GLUCOSE BU HHB
LUMICOLCHICINE BU ALK
BETA-LUMICOLCHICONE BU HHB
6-METHOXY-SALICYLIC-ACID BU HHB
PHYTOSTEROLS PL HHB
GAMMA-RESORCYLIC-ACID-
MONOMETHYL-ETHER BU HHB
SALICYLIC-ACID BU HHB
SITOSTEROL? BU CRC
STARCH BU HHB
STIGMASTEROL? BU CRC

GLYCINE MAX (L.) MERR.**"SOYBEAN"**

ABCISIC-ACID SD NAP
 ACETALDEHYDE PL NAP
 ACETIC-ACID SD HHB
 ACETIC-ACID-CYCLOHEXYL-ESTER LF
 SOY 2/
 ACETIC-ACID-HEXYL-ESTER LF SOY 2/
 ACETONE PL NAP
 5"-O-ACETYL-DAIDZIN 0-145 SD NAP
 6"-O-ACETYL-DAIDZIN 0-80 SD NAP
 6"-O-ACETYL-GENISTIN 17-145 SD NAP
 ACETYL-SOYASAPONIN-A-1 410 SD
 NAP
 ACETYL-SOYASAPONIN-A-2 110 SD
 NAP
 ACETYL-SOYASAPONIN-A-3 30 SD NAP
 ACETYL-SOYASAPONIN-A-4 378 SD
 NAP
 ACETYL-SOYASAPONIN-A-5 89 SD NAP
 ACETYL-SOYASAPONIN-A-6 50 SD NAP
 ACID-PHOSPHATASE PL SOY 2/
 CIS-ACONITIC-ACID RT HHB
 TRANS-ACONITIC-ACID RT HHB
 N-ACYL-PHOSPHATIDYL-ETHANO-
 LAMINE SP NAP
 ADENINE 210-500 SD NAP SOY 2/ WOI
 ADENINE SP HHB
 ADENOSINE SP HHB
 ADENYLIC-ACID SP HHB
 AFROMOSIN LF NAP
 ALANINE 17,190-18,795 SD USA
 ALCOHOL-DEHYDROGENASE PL
 SOY 2/
 ALLANTOIC-ACID LF NAP
 ALLANTOIN SD HHB
 ALLANTOINASE SD WOI
 ALUMINUM 2-60 SD USG WOI
 AMMONIA (NH₃) 8,600 SD NAP
 AMYLASE SD WOI
 ALPHA-AMYLASE SD SOY
 BETA-AMYLASE SD WOI
 ALPHA-AMYRIN SP HHB
 BETA-AMYRIN SP HHB
 ANTHEROXANTHIN LF NAP
 ANTHOCYANIN SD WOI
 ARABINO GALACTAN SD HHB
 ARABINOSE SD HHB
 ARACHIDONIC-ACID SD HHB
 ARGININE 28,310-30,950 SD USA
 ASCORBIC-ACID 290-942 FR CRC
 ASCORBIC-ACID 0-849 SD CRC

ASCORBIC-ACID 100-949 SP CRC
 ASCORBICASE SD WOI
 ASH 16,000-52,000 FR CRC
 ASH 55,000-119,000 PL CRC
 ASH 17,000-61,000 SD CRC USG
 ASH 8,000-58,000 SP CRC
 ASPARAGIC-ACID SD HHB
 ASPARTATE-AMINO-TRANSFERASE PL
 SOY 2/
 ASPARTIC-ACID 45,890-50,175 SD USD
 ASTRAGALIN LF NAP
 BARIUM 1-90 SD USG
 BETAINE SD WOI
 BIOCHANIN-C SD WOI
 BIOTIN 750 SD NAP
 BORNESITOL LF NAP
 BORON 4-18 SD USG
 BOWMAN-BIRK-INHIBITOR 500-3,000
 SD SOY 2/
 BUTANOIC-ACID-3-HEXENYL-ESTER
 LF SOY 2/
 N-BUTYL-AMINE 1 SD NAP
 BUTYROSPERMOL SD NAP
 CADAVERINE SD HHB
 CAFFEIC-ACID 1-4 SD SOY 2/
 CALCIUM 670-2,200 FR CRC WOI
 CALCIUM 9,400-13,000 PL CRC
 CALCIUM 780-4,440 SD CRC USG
 CALCIUM 480-3,504 SP CRC
 CAMPESTEROL SD WOI
 CANAVANINE SD HHB
 N-CAPRIC-ACID SD HHB
 N-CAPRYLIC-ACID SD HHB
 CARBOHYDRATES 132,000-429,000 FR
 CRC
 CARBOHYDRATES 658,000-781,000 PL
 CRC
 CARBOHYDRATES 114,000-404,000 SD
 CRC
 CARBOHYDRATES 53,000-432,000 SD
 CRC
 CARBOXYLASE SD WOI
 6-CARBOXY-PTERIN 0.087 SD NAP
 CARLINOSIDE RT NAP
 BETA-CAROTENE 4.1-13.4 FR CRC
 BETA-CAROTENE 0.3 PL CRC
 BETA-CAROTENE 0-11.3 SD CRC
 BETA-CAROTENE 0.2-3.5 SP CRC
 CATALASE SD WOI
 (+)-CATECHIN LF NAP
 CEPHALIN 4,650-7,750 SD WOI
 CHIROINOSITOL 620 RT NAP
 CHLORINE 200 SD WOI
 CHLOROGENIC-ACID SH NAP

CHLOROPHYLL SD WOI
 CHOLESTEROL SD NAP
 CHOLINE 2,490 SD NAP WOI
 CICERITOL 230-800 SD NAP
 CINNAMIC-ACID-4-HYDROXYLASE TC
 NAP
 CITRIC-ACID 8,000-13,000 SD HHB
 COBALT 0-0.78 SD USG
 BETA-CONGLYCIN SD NAP
 GAMMA-CONGLYCIN SD NAP
 COPPER 4.3-18 SD USG WOI
 COPROPORPHYRIN TC NAP
 GAMMA-COUMARIC-ACID SD NAP
 O-COUMARIC-ACID SD CRC(FNS)
 P-COUMARIC-ACID 1-4 SD NAP SOY
 1-O-PARA-COUMAROYL-BETA-D-
 GLUCOSE SP NAP
 COUMESTRIN RT NAP
 COUMESTROL 1.2 SD NAP
 COUMESTROL 71? SH NAP
 CROCETIN LF NAP
 CYANIDIN-3-GLUCOSIDE SD HHB
 CYANIDIN-3-MONOGLUCOSIDE SD
 HHB
 CYCLOARTENOL SP HHB
 CYCLOLAUDENOL SP HHB
 CYSTEINE 5,880-6,430 SD USA
 DAIDZEIN 14-28 CY SOY
 DAIDZEIN 140-190 HY SOY
 DAIDZEIN 8-328 SD MPI NAP
 DAIDZEIN 7-10 TE SOY
 DAIDZIN 375-1,028 CY SOY
 DAIDZIN 7,599-10,315 HY SOY
 DAIDZIN 129-8,100 SD CCO NAP
 DAIDZIN 66-86 TE SOY 2/
 7-DEHYDROAVENASTEROL SD NAP
 DELPHINIDIN-3-MONOGLUCOSIDE SD
 HHB
 4'-7-DIACETOXYISOFLAVONE SH NAP
 DIAPHORASE PL SOY 2/
 DI-GALACTOSYL-GLYCEROL 100-170
 SD NAP
 6,8-DI-HEXOSYL-GENKWANIN RT NAP
 DIHYDRO-BETA-SITOSTEROL SD HHB
 4'7-DIMETHOXYISOFLAVONE SH NAP
 DIMETHYLAMINE 8 SD HHB NAP
 2,2-DIMETHYL-HEXANAL LF SOY
 1-DODECENE PL SOY
 ERGOST-4-EN-3-6-DION TC NAP
 ERGOST-4-EN-3-ONE TC NAP
 ERGOSTEROL SD HHB
 ERUCIC-ACID SD HHB
 ERYTHRO-NEOPTERIN 0.014 SD NAP
 ESTERASE PL SOY 2/
 ETHANOL PL NAP
 ETHYLAMINE 0.5 SD NAP
 ETHYLENE TC NAP
 ETHYLVINYLKETONE SD HHB
 FAT 51,000-160,000 FR CRC
 FAT 25,000-62,000 PL CRC
 FAT 45,000-218,000 SD CRC
 FAT 14,000-102,000 SP CRC
 FERULIC-ACID 1-4 PL SD SOY
 1-O-FERULOYL-BETA-D-GLUCOSE SP
 NAP
 FIBER 14,000-45,000 FR CRC
 FIBER 281,000-355,000 PL CRC
 FIBER 19,000-63,000 SD CRC
 FIBER 7,000-58,000 SP CRC
 FICAPRENOL-10 LF NAP
 FICAPRENOL-11 LF NAP
 FICAPRENOL-12 LF NAP
 Fisetin LF NAP
 FLAVONOL-3-O-BETA-D-GLUCOSIDE
 LF NAP
 FLAZIN 10 SD NAP
 FLUORINE 0.06 SD USG
 FOLACIN 0.3-4 SD USA
 FORMIC-ACID RT HHB
 FORMOMONETIN PL NAP
 FRUCTOSE ST NAP
 FUMARIC-ACID SD HHB
 GALACTINOL 120-230 SD NAP
 GALACTOMANNAN SD HHB
 GALACTOPINITOL-A 1,520-4,280 SD
 NAP
 GALACTOPINITOL-B 500-1,800 SD NAP
 D-GALACTOSE SD HHB
 GALLIC-ACID 0.1-2.9 LF SOY 2/
 GENISTEIN 28-59 CT SOY
 GENISTEIN 267 EN NAP
 GENISTEIN 242-247 HY SOY
 GENISTEIN 20-46 SD MPI SOY
 GENISTEIN 5-15 TE SOY
 GENISTIN 1,139-2,058 CY SOY 2/
 GENISTIN 53-91 HY SOY 2/
 GENISTIN 522-13,400 SD NAP WOI
 GENISTIN 28-74 TE SOY 2/
 GENTISIC-ACID SD NAP
 GLUCOSAMINE SD V&D
 GLUCOSE 300-570 SD NAP WOI
 GLUCOSE-6-PHOSPHATE-DEHYDROGE-
 NASE PL SOY 2/
 GLUCOSIDASE SD WOI
 O-BETA-D-GLUCOSYL-
 DIHYDROZEATIN LF NAP
 O-BETA-D-GLUCOSYL-
 DIHYDROZEATIN-RIBOSIDE LF NAP

- 6-(4-O-BETA-D-GLUCOSYL-3-METHYL-TRANS-BUT-2-ENYL-AMINO)PURINE TC NAP
 O-BETA-D-GLUCOSYL-DIHYDROZEATIN LF NAP
 O-BETA-D-GLUCOSYL-ZEATIN LF NAP
 O-BETA-D-GLUCOSYL-ZEATIN-RIBOSIDE LF NAP
 GLUCURONIC ACID SD HHB
 GLUTAMATE-OXALOACETIC-TRANSAMINASE PL SOY 2/
 GLUTAMIC-ACID 70,680-77,280 SD USA
 GLUTAMYL-ALANINE SD CCO
 GLUTAMYL-TYROSINE SD CCO
 GLUTARIC-ACID RT HHB
 GLYCEOLLIN-I SP NAP
 GLYCEOLLIN-II SP NAP
 GLYCEOLLIN-III SP NAP
 GLYCEOLLIN-IV CY NAP
 GLYCINE 16,870-18,445 SD USA
 GLYCININE 345,000-388,880 SD WOI
 GLYCINOPRENOL-9 LF NAP
 GLYCINOPRENOL-10 LF NAP
 GLYCINOPRENOL-11 LF NAP
 GLYCITEIN 93-118 HY SOY 2/
 GLYCITEIN 13-30 SD SOY 2/
 GLYCITEIN 15 TE SOY 2/
 GLYCITEIN-7-O-BETA-D-GLUCOSIDE 129 SD NAP
 GLYCITIN SD NAP
 GLYCITIN-7-BETA-GLUCOSIDE 16-17 CY SOY
 GLYCITIN-7-BETA-GLUCOSIDE 5,888-6,641 HY SOY
 GLYCITIN-7-BETA-GLUCOSIDE 95-159 SD SOY
 GLYCOLIC-ACID RT SD SP HHB
 GOSSYPOL? 60 SD NAP
 GUANIDINE SD WOI
 2,4-HEXADIEN-1-OL PL SOY
 HEXAN-1-AL PL NAP 2/
 1-HEXANOL PL SOY 2/
 2-HEXENAL PL SOY 2/
 3-HEXENAL-1-OL PL SOY 2/
 4-HEXENYLOL-ACETATE PL SOY 2/
 HISPIDINIC-ACID SP HHB
 HISPIDOL SD HHB
 HISTIDINE 9,840-10,770 SD USA
 HISTIDINE SP HHB
 P-HYDROXYBENZOIC-ACID 0.7-2.7 SD SOY 2/
 4-HYDROXY-BENZOIC ACID LF RT SOY 2/
 4-HYDROXYCINNAMIC-ACID LF SOY 2/
 3-HYDROXY-LINOLEIC-ACID TC NAP
 3-HYDROXY-OLEIC-ACID TC NAP
 6-HYDROXY-METHYL-PTERIN 0.062 SN NAP
 HYDROXYPHASEOLIN SD HHB (FUNGICIDE)
 HYPOGEIC-ACID SP CCO
 HYPOXANTHINE SP HHB
 BETA-INDOLACETIC-ACID SH HHB
 INDOLE-3-ACETIC-ACID RT (NODULES) NAP
 INOSITOL SP HHB
 INOSITOL-HEXAPHOSPHATE 14,000 SD SOY 2/
 INVERTASE TC NAP
 IODINE 0.5-16 SD USG
 IRON 28-91 FR CRC
 IRON 210 PL CRC
 IRON 38-180 SD CRC USA WOI
 IRON 10-73 SP CRC
 ISOCAPRIC-ACID SD HHB
 ISOCITRATE-DEHYDROGENASE PL SOY 2/
 ISOCOUMARIC-ACID PL NAP
 ISOFERULIC-ACID SD NAP
 ISOFLAVONES 3,010-10,000 SD ABS
 ISOFUCOSTEROL SD NAP
 ISOLEUCINE 19,353 SD USD
 ISOLIQUIRITIGENIN SD HHB
 ISOPROPYL-AMINE SD NAP
 ISOQUERCITRIN LF NAP
 ISOSCHAFTOSIDE 278 RT NAP
 ISOVALERIANIC-ACID SD HHB
 ISOXANTHOPTERIN 0.062 SD NAP
 JASMONIC-ACID PE NAP
 KAEMPFEROL PL NAP
 KAEMPFEROL-3-O-BETA-O-2-GENTIOBIOSIDE LF NAP
 KAEMPFEROL-3-O-BETA-O-2-GLUCOSYL-GENTIOBIOSIDE LF NAP
 KAEMPFEROL-3-O-BETA-O-2-GLUCOSYL-RUTINOSIDE LF NAP
 KAEMPFEROL-3-O-BETA-D-NEOHESPERIDOSIDE LF NAP
 KAEMPFEROL-3-O-BETA-D-O-2-RHAMNOSYL-GENTIOBIOSIDE LF NAP
 KAEMPFEROL-3-O-BETA-D-O-2-RHAMNOSYL-RUTINOSIDE LF NAP
 KAEMPFEROL-3-O-BETA-D-RUTINOSIDE PL NAP

KAEMPFEROL-3-0-SOPHOROSIDE LF
 NAP
 ALPHA-KETOGLUTARIC-ACID SD HHB
 KILOCALORIES 1,340-4,350 FR CRC
 KILOCALORIES 1,390-4,548 SD CRC
 WOI
 KILOCALORIES 460-3,360 SP CRC
 KUNITZ-TRYPSIN-INHIBITOR 500 SD
 SOY
 LECITHIN 15,000-25,000 SD WOI
 LECTIN,SOYBEAN(SBL) 0-9,760 SD ABS
 LEGUMELIN SD WOI
 LEUCINE 29,720-32,500 SD USA
 LEUCINE-AMINO-PEPTIDASE PL
 SOY 2/
 LIGNIN TC NAP
 LIGNOCERIC-ACID SD HHB
 LINOLEIC-ACID 70,335-126,082 SD WOI
 ALPHA-LINOLENIC-ACID 13,300-14,540
 SD USA
 LINOLENIC-ACID 6,666-9,027 SD WOI
 LIPASE SD WOI
 LIPOXIDASE SD WOI
 LIPOXYGENASE SP NAP
 LIPOXYGENASE PL SOY 2/
 LUMAZINE SD NAP
 LUPEOL SD NAP
 LUTEIN LF NAP
 LYSINE 24,290-26,560 SD USA
 MAGNESIUM 430-3,160 SD USA USGG
 WOI
 MALATE-DEHYDROGENASE PL SOY 2/
 MALIC-ACID 700-1,000 SD HHB
 MALTOSSE SP HHB
 MANGANESE 8-60 SD USA
 MANNOSSE-6-PHOSPHATE-ISOMERASE
 PL SOY 2/
 METHANOL PL NAP
 METHIONINE 4,920-5,380 SD USA
 METHYLAMINE 0.5-50 SD HHB NAP
 24-METHYLENE-CYCLOARTENOL SD
 NAP
 METHYLGENISTEIN SD CCO
 N-METHYL-PHENETHYLAMINE 50 SD
 NAP
 MOLYBDENUM 0-4 SD USG
 MUFA 44,040-48,150 SD USA
 MYOINOSITOL 900 RT NAP
 MYRISTIC-ACID 550-600 SD USA
 NADP-ACTIVE-ISOCITRATE-DEHYDRO-
 GENASE PL SOY 2/
 NARINGENIN LF SOY 2/
 BETA-NEOCAROTENE SD NAP
 NEOCHLOROGENIC-ACID PL NAP
 NEOXANTHIN LF NAP
 NEURAMINIC-ACID SD HHB
 NH3 8,600 SD NAP
 NIACIN 14-46 FR CRC
 NIACIN 13-32 SD CRC USD
 NIACIN 8-58 SP CRC
 NICKEL 1-30 SD USG
 NICOTIFLORIN LF NAP
 NITROGENASE TC NAP
 N-NONANOIC-ACID SD HHB
 TRANS-OCIMENE PL SOY 2/
 OCTADECA-2,9-DIENOIC-ACID TC NAP
 OCTADECA-9,12-DIENOIC-ACID TC
 NAP
 OCTADECA-2,9,12-TRIENOIC-ACID TC
 NAP
 3-OCTANOL LF SOY 2/
 3-OCTANONE LF SOY 2/
 7-OCTEN-4-OL LF SOY 2/
 OLEIC-ACID 40,230-72,116 SD WOI
 ONONIN PL NAP
 ONONITOL 190 RT (NODULES) NAP
 D-ONITOL LF NAP
 OXALIC-ACID RT HHB
 OXALIC-ACID 770 SD WBB
 PALMITIC-ACID 14,895-26,862 SD WOI
 PALMITOLEIC-ACID 550-600 SD USA
 PANTOTHENIC-ACID 6-12 SD USA WOI
 PENTANAL PL NAP
 PENTANE PL NAP
 PERLOLIDIN SD NAP
 PEROXIDASE SD WOI
 PHASEOL LF NAP
 PHASEOLIN SD WOI
 PHASIN SD HHB
 PHENYLALANINE 19,050-20,830 SD USA
 PHENYLALANINE-AMMONIA-LYASE
 TC USA
 PHOSPHATIDES 1,350-7,260 SD WOI
 PHOSPHATIDIC-ACID SP NAP
 PHOSPHATIDYL-CHOLINE SD NAP
 PHOSPHATIDYL-ETHANOLAMINE SP
 NAP
 PHOSPHATIDYL-GLYCEROLE SP NAP
 PHOSPHATIDYL-INOSITOL SP NAP
 PHOSPHOGLUCOMUTASE PL SOY 2/
 PHOSPHOGLUCOSE-ISOMERASE PL
 SOY 2/
 PHOSPHORUS 2,250-7,305 FR CRC
 PHOSPHORUS 2,400-5,410 PL CRC
 PHOSPHORUS 1,580-8,040 SD CRC USG
 PHOSPHORUS 580-4,891 SP CRC

- PHYSETOLIC-ACID SD HHB
 PHYTASE SD WOI
 PHYTIC-ACID SD NAP
 PHYTOHEMAGGLUTININ SD NAP
 PHYTOSTEROLS 1,610-1,760 SD USA
 PINTOL 10,000 LF NAP
 PINTOL 550 RT(NODULES) NAP
 PINTOL 2,000-2,980 SD NAP
 D-PINTOL SD ST NAP
 PIPERIDINE SD HHB
 POLYSACCHARIDES 120,000 SD WOI
 POTASSIUM 10,600 PL CRC
 POTASSIUM 4,100-27,600 SD CRC USG
 POTASSIUM 2,790-15,081 SP CRC
 PROLINE 21,350-23,344 SD USA
 PROPANAL PL NAP
 PROPIONIC-ACID SD HHB
 PROTEASE SD WOI
 PROTEIN 109,000-354,000 FR CRC
 PROTEIN 139,000-166,000 PL CRC
 PROTEIN 130,000-409,000 SD CRC
 PROTEIN 62,000-453,000 SP CRC
 PROTOCATECHUIC-ACID 0.2-0.5 PL
 SOY 2/
 PTERIN 0.052 SD NAP
 PUFA 112,550-123,060 SD USD
 PYRIDOXINE 6.4 SD WOI
 PYROGLUTAMIC-ACID 1,000-3,000 SD
 HHB
 QUERCETIN PL NAP
 QUERCETIN-3-O-BETA-D-2-GLUCOSYL-
 RUTINOSIDE LF NAP
 QUERCETIN-3-O-BETA-O-
 SOPHOROSIDE LF NAP
 QUERCITRIN LF NAP
 RAFFINOSE 5,000-15,000 SD NAP WOI
 RIBOFLAVIN 1.6-5 FR CRC
 RIBOFLAVIN 1.7-13 SD CRC USA
 RIBOFLAVIN 1.5-15 SP CRC
 RIBOSE-1,5-DIPHOSPHATE-CARBOXY-
 LASE TC NAP
 ROTENOIDS 1,000 SD SOY
 RUTIN SH NAP
 SALICYLIC-ACID SD NAP
 SAPONINS 50,000 SD SOY
 SAPOGENOL-C SP NAP
 SELENIUM 0.04-1.25 SD USG
 SEQUOYITOL LF NAP
 SERINE 21,150-23,125 SD USA
 SERINE PL NAP
 SFA 14,850-32,670 SD USA WOI
 SILICON SD WOI
 SINAPIC-ACID SD NAP
 SINAPIC-ACID LF SOY 2/
 BETA-SITOSTEROL 900 SD SOY
 GAMMA-SITOSTEROL SD WOI
 SODIUM 9-3,800 SD CRC USA WOI
 SODIUM 300-1,622 SP CRC
 SOJAGOL PL NAP
 SOPHORAFLAVANOLOSIDE LF NAP
 SOYASAPOGENOL-A SD NAP
 SOYASAPOGENOL-B SD NAP
 SOYASAPOGENOL-B-1 SD NAP
 SOYASAPOGENOL-C SD NAP
 SOYASAPONIN-A SD HHB
 SOYASAPONIN-A-1 239-400 SD NAP
 SOYASAPONIN-A-2 EM NAP
 SOYASAPONIN-A-3 SD 100 SD NAP
 SOYASAPONIN-A-4 SD NAP
 SOYASAPONIN-A-5 SD NAP
 SOYASAPONIN-A-6 SD NAP
 SOYASAPONIN-B SD HHB
 SOYASAPONIN-C SD HHB
 SOYASAPONIN-D SD HHB
 SOYASAPONIN-E SD HHB
 SOYASAPONIN-I 300-3,000 CY SOY 2/
 SOYASAPONIN-I 5,000-19,000 HY
 SOY 2/
 SOYASAPONIN-I 1,500-11,100 LF SOY 2/
 SOYASAPONIN-I 100-2,500 PC SOY 2/
 SOYASAPONIN-I 600-3,300 RT SOY 2/
 SOYASAPONIN-I 139-1,200 SD CCO NA
 SOYASAPONIN-I 300-1,300 ST SOY 2/
 SOYASAPONIN-II 47-150 SD CCO NAP
 SOYASAPONIN-III 10-22 SD CCO NAP
 SOYASAPONIN-IV 140-160 SD NAP
 SOYASAPONIN-V SD NAP
 SQUALENE SD HHB
 STACHYOSE 22,300-51,050 SD WOI NAP
 STARCH 10,000 SD WOI
 STEARIC-ACID 4,320-7,785 SD USA WOI
 STIGMASTA-4-22-DIEN-3-ONE TC NAP
 STIGMASTA-4-22-DIEN-3-6-DIONE TC
 NAP
 STIGMAST-4-EN-3-6-DIONE TC NAP
 STIGMAST-4-EN-3-ONE TC NAP
 STIGMASTEROL SD WOI
 STRONTIUM 3-42 SD USG
 SUCCINIC-ACID RT SD SP HHB
 SUCROSE 27,950-71,700 SD NAP SOY 2/
 WOI
 SUGARS 125,000 SD WOI
 SULFUR 4,066 SD WOI
 SYRINGIC-ACID 4.1-4.7 RT SOY 2/
 SYRINGIC-ACID SD NAP
 TATOIN SD WOI

3-TETRADECENE LF SOY 2/
 TETRAMETHYLPYRAZINE SD CCO
 THIAMIN 4.4-14 FR CRC
 THIAMIN 4-10 SD CRC USA
 THIAMIN 1.9-17 SP CRC
 THREONEOPTERIN 0.017 SD NAP
 THREONINE 15,850-17,330 SD USA
 TITANIUM 0-12 SD USG
 ALPHA-TOCOPHEROL 29-280 LF CCG
 ALPHA-TOCOPHEROL 8-19 SD ABS
 USA
 ALPHA-TOCOPHEROL 95 OI TOT
 BETA-TOCOPHEROL SD NAP
 DELTA-TOCOPHEROL SD NAP
 GAMMA-TOCOPHEROL 140 SD ABS
 GAMMA-TOCOPHEROL 699 OI TOT
 4'-5-7-TRIACETOXYISOFLAVONE SH
 NAP
 TRIGONELLINE 3.7-16.2 FR NAP
 TRIGONELLINE 10.5-63.2 LF NAP
 TRIGONELLINE 1.1 RT NAP
 TRIGONELLINE 19.7-71.8 SD NAP WOI
 TRIGONELLINE 1.5-7.6 ST NAP
 (6AR,11AR)-3-6(A)-9-
 TRIHYDROXYPTEROCARPAN CY
 NAP
 4'-5-7-TRIMETHOXYISOFLAVONE SH
 NAP
 3,5,5,TRIMETHYL-2-HEXENE SD SOY 2/
 TRYPOTPHAN 5,300-5,795 SD USA
 TYROSINE 13,800-15,090 SD USA
 UNDYLIC-ACID SP HHB
 UREASE SD WOI
 URICASE SD WOI
 UROPORPHYRIN TC NAP
 N-VALERIANIC-ACID SD HHB
 VALINE 18,210-19,910 SD USA
 VANILLIC-ACID 1-4 RT SOY 2/
 VANILLIC-ACID SD NAP
 VERBACOSE 280-410 SD NAP
 VERBASCOSIDE TR-3,000 SD SOY 2/ NAP
 VIOLAXANTHIN LF NAP
 VIT-B6 3-6 SD USA
 VIT-D SD WOI
 VIT-E SD WOI
 VIT-K SD WOI
 VITEXIN RT NAP
 VITEXIN-2"-O-RHAMNOSIDE RT NAP
 WATER 692,000 FR CRC
 WATER 83,980-682,000 SD CRC USA
 WATER 815,000-863,000 SP CRC
 XANTHINE SP CCO
 XYLOGALACTOMANNAN SD HHB

XYLOSE SD HHB
 ZINC 22-90 SD USG WOI
 ZIRCONIUM 0.8-2.4 SD USG

2/SOY= Documents surveyed for NCI
 Soybean Workshop, June 27, 1990

GLYCYRRHIZA GLABRA L.

"LICORICE"

ACETIC-ACID 2 RT 1/
 ACETOIN RT NAP
 ACETOL RT NAP
 ACETOPHENONE TR RT 1/
 7-ACETOXY-2-METHYLISOFLAVONE
 RT JAD NAP
 2-ACETYLFURAN RT NAP
 2-ACETYL-5-METHYL-FURAN RT NAP
 1-ACETYLPYRROLE RT NAP
 O-ACETYL-SALICYLIC-ACID 1,500-1,636
 RT JAD NAP
 ALUMINUM 182 RT PED
 BETA-AMYRIN RT NAP
 ANETHOLE 1 RT 1/
 APIGENIN RT NAP
 ASCORBIC-ACID 626 RT PED
 ASH 107,000 RT PED
 ASPARAGINE 20,000-40,000 RT
 ASTRAGALIN SH NAP
 BENZALDEHYDE RT 411/
 BENZOIC-ACID RT NAP
 BENZYL-ALCOHOL RT NAP
 BERGAPTEN SH NAP
 BETAINE
 BETULIC-ACID
 BUTANOIC-ACID 2 RT 1
 BUTAN-1-OL-2-ONE RT NAP
 BUTAN-1-OL-3-ONE RT NAP
 BUTANE-2,3-DIOL RT NAP
 BUTYLPHTHALATE RT NAP/
 GAMMA-BUTYROLACTONE RT NAP
 BUTYRIC-ANHYDRIDE RT NAP
 CALCIUM 8,780 RT PED
 CAMPHOR TR RT 1/
 CAPROIC-ACID RT NAP
 CARBOHYDRATES 773,000 RT PED
 BETA-CAROTENE TR RT PED
 BETA-CAROTENE 5 SD
 CARVACROL RT NAP
 CELLULOSE 300,000
 CHOLINE RT PED
 CHROMIUM 17 RT PED
 COBALT 101 RT PED

- O-CRESOL TR RT 1/
 CUMIC-ALCOHOL 4 RT 1/
 P-CYMENE RT NAP
 P-CYMENOL RT NAP
 DECANE TR RT 1/
 DECANOIC-ACID 1 RT 1/
 DESOXOGLABROLIDE
 11-DESOXOGLYCYRRHETINIC-ACID
 11-DEOXO-GLABROLIDE RT NAP
 DIFURFURYL-ETHER RT NAP
 2,4-DIFURFURYL-FURAN RT NAP
 2,2-DIFURYL-ETHANE RT NAP
 2,2-DIFURYL-ETHYLENE RT NAP
 2,2-DIFURYL-METHANE RT NAP
 2,3-DIHYDROBENZOFURAN 1 RT 1/
 DIHYDRO-5,5-DIMETHYL-2(3H)-
 FURANONE 2 RT 1/
 2,4-DIHYDROXY-ACETOPHENONE RT
 NAP
 2,7-DIHYDROXY-3',4'-
 DIMETHOXYISOFLAVONE PL JSG
 4',7-DIHYDROXYFLAVONE PL JSG
 3,24-DIHYDROXY-OLEANA-9(11),12-
 DIENOIC-ACID SH NAP
 3,24-DIHYDROXY-OLEANA-11,13(18)-
 DIENOIC-ACID SH NAP
 2,3-DIHYDRO-4-METHYL-FURAN
 2 RT 1/
 22,23-DIHYDROSTIGMASTEROL
 6-(GAMMA,GAMMA-DIMETHYL-
 ALLYL)-5,7-DIHYDROXY-FLA-
 VANONE SH NAP
 DIMETHYL-PHENYLETHYL-ALCOHOL
 RT NAP
 2,6-DIMETHYL-PYRAZINE RT NAP
 DOCOSANE TR RT 1/
 DODECANE TR RT 1/
 DODECANOIC-ACID TR RT 1/
 ECHINATIN PL JSG
 EICOSANE TR RT 1/
 EO 470 RT 1/
 ESTRAGOLE 1 RT 1/
 ESTRIOL? RT NAP
 2-ETHYL-1,4-DIMETHYL-BENZENE 1
 RT 1/
 ETHYL-LINOLEATE RT NAP
 ETHYL-LINOLENATE RT NAP
 2-ETHYL-6-METHYL-PYRAZINE RT
 NAP
 ETHYL-PALMITATE RT NAP
 ETHYL-PHENYLACETATE RT NAP
 ETHYL-PHENOL RT NAP
 EUGENOL 1 RT 1/
 FAT 8,000-10,000 RT PED
 FENCHONE RT PED
 FERULIC-ACID
 FIBER 84,000 RT PED
 FORMONONETIN 33-66 RT NAP
 2-FORMYL-5-METHYL-PYRROLE RT
 NAP
 FRUCTOSE RT NAP
 FURFURAL 2 RT 1/
 FURFURYL-ACETATE RT NAP
 1-FURFURYL-2-ACETYL-PYRROLE RT
 NAP
 FURFURYL-ALCOHOL RT 411/
 FURFURYL-BUTYRATE RT NAP
 FURFURYL-FORMATE RT NAP
 1-FURFURYL-2-FORMYL-PYRROLE RT
 NAP
 FURFURYL-PROPIONATE RT NAP
 FURYL-METHYL-KETONE RT NAP
 1-(2-FURYL)-PROPAN-2-ONE RT NAP
 GALANGIN? SH NAP
 GENISTEIN SH NAP
 GERANIOL RT NAP
 GLABRALONIC-ACID PL JSG
 GLABRANIN 3,200 SH NAP
 GLABRENE 80-129 RT NAP
 GLABRIC-ACID RT NAP
 GLABRIDIN 400-1,432 RT NAP
 GLABROL 44-129 RT NAP
 GLABROLIDE RT NAP
 GLABRONE 12 RT NAP
 2-BETA-GLUCOSONOSYL-GLUCU-
 RONIC-ACID
 GLUCOSE 30,000-42,300 RT NAP PED
 GLYCESTRONE SH NAP
 GLYCOCUMARIN 710 RT NAP
 GLYCYRIN 100 RT NAP
 GLYCYROL RT NAP
 GLYCYRRAM RT NAP
 GLYCYRRHETIC-ACID
 GLYCYRRHETINIC-ACID 6,000-22,400
 RT NAP
 18-ALPHA-GLYCYRRHETINIC-ACID
 5,200 RT NAP
 18-BETA-GLYCYRRHETINIC-ACID
 39,800-95,200 RT NAP
 GLYCYRRHETOL RT NAP
 GLYCYRRHISOFLAVANONE RT NAP
 GLYCYRRHISOFLAVONE RT NAP
 GLYCYRRHIZIC-ACID 100,000-240,000
 GLYCYRRHIZIN 16,000-152,000 RT NAP
 18-ALPHA-GLYCYRRHIZINIC-ACID RT
 NAP
 18-BETA-GLYCYRRHIZINIC-ACID RT
 NAP

GLYZAGLABRIN RT NAP
 GLYZARIN RT 411/
 GUAIACOL TR RT 1/
 GUM
 HEDERASAPONIN-C RT NAP
 HENICOSANE TR RT 1/
 HEPTADECANE TR RT
 GAMMA-HEPTALACTONE RT NAP
 HEPTANE-1,2-DIOL RT NAP
 HEPTANOIC-ACID 12 RT 1/
 HERNIARIN RT PED
 HERANOL RT PED
 HEXADECANE TR RT 1/
 HEXADECANOIC-ACID 16 RT 1/
 HEXADECYL-ACETATE TR RT 1/
 GAMMA-HEXALACTONE RT NAP
 2-HEXANAL 2 RT 1/
 HEXAN-1-OL RT NAP
 HEXANOIC-ACID 148 RT 1/
 HEXANOL 8 RT 1/
 HEX-TRANS-3-EN-OL RT NAP
 HEXYL-FORMATE 4 RT 1/
 HISPAGLABRIDIN-A 126 RT NAP
 HISPAGLABRIDIN-B 119 RT NAP
 HISPAGLABRIN-A 60
 HISPAGLABRIN-B 60
 3-HYDRO-5-METHYL-FURAN-2-ONE RT
 NAP
 P-HYDROXYBENZOIC-ACID PL PAS
 4-HYDROXYCHALCONE
 24-HYDROXY-11-
 DEOXYGLYCYRRHETIC-ACID PL JSG
 18ALPHA-HYDROXYGLYCYRRHETIC-
 ACID PL JSG
 23-HYDROXYGLYCYRRHETIC-ACID PL
 JSG
 28-HYDROXYGLYCYRRHETIC-ACID
 RTY JAD NAP
 24-HYDROXYGLYCYRRRHIZIN
 21-ALPHA-HYDROXY-ISOGLABROLIDE
 RT NAP
 24-HYDROXYLIQUIRITIC-ACID RT NAP
 2-HYDROXY-4-METHYL-BENZALDE-
 HYDE 1 RT 1/
 2-HYDROXY-5-METHYL-CYCLOPENT-2-
 EN-1-ONE RT NAP
 7-HYDROXY-2-METHYLISOFLAVONE
 RT JAD NAP
 4-HYDROXY-4-METHYL-PENTAN-2-ONE
 RT NAP
 INDOLE 2 RT 1/
 IRON 880 RT PED
 ISOBUTYL-ADIPATE 1 RT 1/
 ISOGLABROLIDE RT NAP
 ISOGLYCYROL 200 RT NAP
 ISOLIQURITIGENIN PL PAS
 ISOLIQURITIN RT NAP
 ISOMUCRONULATOL RT NAP
 ISONEOLIQURITIN RT NAP
 ISOQUERCITRIN PL PAS
 ISOSCHAFTOSIDE RT NAP
 ISOVIOLANTHIN RT NAP
 KAEMPFEROL SH NAP
 KILOCALORIES 2,680 RT PED
 KUMATAKENIN RT 411/
 LAVANDOLOL RT NAP
 LICOCHALCONE-A RT NAP
 LICOCHALCONE-B RT NAP
 LICOCOUMARONE PL PAS
 LICOFLAVANONE 4,900 LF NAP
 LICOFLAVONOL RT PED
 LICOISOFLAVANONE RT 411/
 LICOISOFLAVONE-A RT NAP
 LICOISOFLAVONE-B RT NAP
 LICOISOFLAVONE-C RT NAP
 LICORIC-ACID RT 411/
 LICORICIDIN
 LICORICONE PL JSG
 LICURASIDE RT 411/
 LICUROSIDE RT NAP
 LIGNIN 180,000 RT
 LINALOOL 2 RT 1/
 LINALOOL-A-OXIDE RT NAP
 LINALOOL-B-OXIDE RT NAP
 LIQCOUMARIN 23 RT PED NAP
 LIQUIRAZIDE RT NAP
 LIQUIRIDIOLIC-ACID PL JSG
 LIQUIRITIC-ACID RT PED
 LIQUIRITIGENIN RT NAP
 LIQUIRITIN
 LIQUIRITINIC-ACID
 LIQUIRITOGENIN-CHALCONE
 LIQUIRITOGENIN-4'-O-BETA-D-
 GLUCOSYL-APIOSIDE RT NAP
 LIQUORIC-ACID RT NAP
 MAGNESIUM 9,650 RT PED
 MALIC-ACID
 MALTOL PL PAS
 MALTOSE RT NAP
 MANGANESE 47 RT PED
 MANNITOL
 2-METHALYL-PHENOL 1 RT 1/
 7-METHOXY-3,7-DIMETHYL-OCTANAL
 TR RT 1/
 3'-METHOXYGLABRIDIN 117 RT
 NAP
 1-METHOXY-4-ISOPROPYL-BENZENE
 TR RT 1/

- 1-METHOXY-4-ISOPROPYL-CYCLOHEX-
ANE 2 RT 1/
3-METHOXY-2-METHYL-PROPANE 2
RT 1
7-METHOXY-2-METHYLISOFLAVONE
PL JSG
O-METHOXY-PHENOL RT NAP
P-METHOXY-PHENOL RT NAP
2-METHYL-3-DECEN-5-ONE TR RT 1/
METHYL-ETHYL-KETONE RT NAP
1-METHYL-2-FORMYL-PYRROLE RT
NAP
4'-O-METHYLGLABRIDIN 169 RT NAP
5-O-METHYLGLYCYROL
6-METHYL-3,5-HEPTADIEN-2-ONE
2 RT 1/
3-METHYL-3-HEPTEN-2-ONE TR RT 1/
6-METHYL-5-HEPTEN-2-ONE TR RT 1/
METHYL-HEXADECANOATE 1 RT 1/
METHYL-HEXANOATE TR RT 1/
4-METHYL-ISOPROPYL-3-
CYCLOHEXEN-1-OL 6 RT 1/
2-METHYL-5-ISOPROPYL-2-
CYCLOHEXEN-1-ONE
TR RT 1/
2-METHYL-5-ISOPROPYL-PHENOL
2 RT 1/
2-METHYL-6-METHYLENE-7-OCTEN-2-
OL 1 RT 1/
2-METHYL-PROPANOIC-ACID TR RT 1/
3-METHYL-6-PROPYL-PHENOL TR
RT 1/
N-METHYL-2-PYRROLIDONE 5 RT 1/
METHYL-SALICYLATE
5-METHYL-2-UNDECENE 2 RT 1/
6-METHYL-3-UNDECENE TR RT 1/
9-METHYL-3-UNDECENE 2 RT 1/
MYRTENAL TR RT 1/
MUCIN
NARINGENIN SH NAP
NEOLIQUIRITIN RT 411/
NEOSOLIQUIRITIN RT 411/
NIACIN 70 RT PED
NICOTINIC-ACID 100-1,000 LF NAP
N-NONACOSANE RT NAP
NONADECANE TR RT 1/
GAMMA-NONALACTONE 6 RT 1/
NONANOIC-ACID 2 RT 1/
OCTACOSAN-1-OL RT NAP
OCTADECANE TR RT 1/
3,5-OCTADIEN-2-ONE TR RT 1/
GAMMA-OCTALACTONE RT NAP
OCTANOIC-ACID 7 RT 1/
OCT-1-EN-3-OL RT NAP
ONOCERIN
OXALIC-ACID
PALMITIC-ACID RT PED
PECTIN 58,000 SH NAP
PENTACOSANE TR RT 1/
PENTADECANE TR RT 1/
PENTADECANOIC-ACID TR RT 1/
1-PENTADECANOL 1 RT 1/
PENTANOIC-ACID 4 RT 1/
PENTAN-1-OL RT NAP
2-PENTYL-FURAN 2 RT 1/
5-PENTYLPYRAN-2-ONE 1 RT 1/
PHASEOLLINISOFLAVAN 27 RT NAP
2-PHENETHANOL RT NAP
PHENETHYL-ALCOHOL 1 RT 1/
PHENOL RT NAP
PHENYL-ACETALDEHYDE TR RT 1/
PHENYL-PROPIONIC-ACID RT NAPPL
PAS
PHOSPHORUS 790 RT PED
PINOCEMBRIN 9,500-9,700 SH NAP
POTASSIUM 11,400 PL PED
4-PROPENYL-ANISOLE RT NAP
4-PROPENYL-TOLUENE RT NAP
PROPIONIC-ACID RT NAP
PROTEIN 110,000 RT PED
PRUNETIN PL NAP
PSEUDOIONONE 1 RT 1/
PYRAZOLE RT NAP
QUERCETIN PL PAS
RESIN
RHAMNOISOLIQUIRITIN RT 411/
RHAMNOLIQUIRITIN RT 411/
RIBOFLAVIN 1.6 RT PED
SALICYLIC-ACID 567 RT JAD NAP
SCHAFTOSIDE RT NAP
SELENIUM 1 RT PED
SILICON 158 RT PED
SINAPIC-ACID
BETA-SITOSTEROL RT NAP
SODIUM 8,180 RT PED
STARCH 50,000-200,000 RT PED
STIGMASTEROL RT PAS
SUCROSE 24,000-90,000 RT PED
SUGAR 30,000-140,000 RT PED
TERPIN-1-EN-4-OL RT NAP
ALPHA-TERPINEOL RT NAP
TETRACOSANE TR RT 1/
TETRACOSAN-1-OL RT NAP
N-TETRADECANE TR RT 1/ NAP
TETRADECANOIC-ACID TR RT 1/
TETRAHYDRO-2-METHYL-FURAN-3-
ONE RT NAP
TETRAMETHYL-PYRAZINE RT NAP

THIAMIN 2.1 RT PED
 THUJONE RT NAP
 THYMOL RT NAP
 TIGLALDEHYDE RT NAP
 TIN 24 RT PED
 O-TOLUNITRILE 1 RT 1/
 TRICOSANE TR RT 1/
 TRIDECANE TR RT 1/
 TRIDECANOIC-ACID TR RT 1/
 TRIMETHYL-PYRAZINE RT NAP
 UMBELLIFERONE RT 411/
 UNDECANE TR RT 1/
 UNDECANOIC-ACID TR RT 1/
 VITEXIN PL PAS
 XANTHOTOXIN SH NAP
 ZINC 3 RT PED

1/ Kameoka, H. and Nakai, K. 1987.

Components of essential oil from the root
 of *Glycyrrhiza-glabra*. Nippon Gogeikagaku
 Kaishi 61(9): 1119-1122.

GLYCYRRHIZA URALENSIS
 FISCH. & DC.

“CHINESE LICORICE; KAN-TSAO;
 GAN-CAO”

ARSENIC 0.29 RT CAL
 ASPARANIC-ACID RT CCO
 CALCIUM 6,850-23,500 RT CAL SMO
 COPPER 13-14 RT CAL SMO
 GLABRIC-ACID RT CCO
 GLABROLIDE RT CCO
 GLUCOSE RT CCO
 GLUCURONIC-ACID RT CCO
 GLYCYROL RT CCO
 GLYCYRRHETIC-ACID RT CCO
 GLYCYRRHIZIN RT CCO
 28-HYDROXYGLYCYRRHETIC-ACID RT
 CCO
 IRON 180-280 RT CAL SMO
 ISOGLYCYROL RT CCO
 ISOLIQURITIGENIN RT CCO
 ISOLIQURITIN RT CCO
 LICOFLAVONE RT CCO
 LICORICIDIN RT CCO
 LICORICONE RT CCO
 LICORINONE RT CCO
 LIQURITIGENIN RT CCO
 LIQURITIN RT CCO
 MAGNESIUM 3,690-5,070 RT CAL SMO
 MANGANESE 13-26 RT CAL SMO
 MANNITOL RT CCO
 5-O-METHYLGLYCYROL RT CCO

2-METHYL-7-HYDROXYISOFLAVONE
 RT CCO
 POTASSIUM 2,500-3,140 RT CAL SMO
 SAPONINS 60,000-140,000 RT CCO
 SODIUM 323-1,340 RT CAL SMO
 SUCROSE RT CCO
 URALENIC-ACID PL JSG
 ZINC 11-13 RT CAL SMO

1/ There's no guarantee that mineral data
 (CAL;SMO) necessarily apply to this
 species of *Glycyrrhiza*.

GOSSYPIUM SP

“COTTON”

ALUMINUM-OXIDE 100-600 SD WOI
 BETA-AMYRIN PL HHB
 ARACHIDIC-ACID 960-2,690 SD WOI
 ASH 34,100-47,000 SD WOI
 1-trans-alpha-BERGAMOTENE 3,300 EO
 HHB
 BETAINE SD WOI
 BIOTIN 0.3 SD WOI
 BISABOLENEOXIDE PL HHB
 D-beta-BISABOLOL
 CIS-GAMMA-BISABOLOL 29,000? EO
 HHB
 CADINENE 2,400 EO HHB
 CALCIUM-OXIDE 2,400-4,400 SD WOI
 CAMPHENE PL HHB
 CARBOHYDRATES 500,000-555,000 SD
 WOI
 (-)-CARYOPHYLLENE 75,100 EO HHB
 CARYOPHYLLENEPOXIDE PL HHB
 (-)-CATECHIN 40-120? ST HHB
 CELLULOSE 21,500 SD WOI
 CEROTINIC-ACID FL HHB
 CERYL-ALCOHOL RT JFM
 CHLORINE 200-400 SD WOI
 CHOLINE SD WOI
 CHRYSANTHEMIN FL HHB
 COPAENE 2,400 EO HHB
 P-COUMARIC-ACID PL JLS58:141
 CYANIDIN PL JLS58:141
 CYCLOARTENOL FL HHB
 DELPHINIDIN PL JLS58:141
 DOTRIACONTANOL LF HHB
 (-)-EPIGALLOCATECHIN 40-120? ST
 HHB
 ERGOSTEROL SD WOI
 FARNESENE 300 EO HHB
 FAT 160,000-207,000 SD WOI
 FIBER 167,500-243,700 SD WOI

FOLIC-ACID 3.8 SD WOI
 GALLOCATECHIN 40-120? ST HHB
 GOSSYCAERULIN SD WOI
 GOSSYFULVIN SD WOI
 GOSSYPOL 500-7,000 OI (PERS.COMM.)
 WOI
 GOSSYPOL 50-2,500(-20,000) SD
 JAF38:506 WOI
 GOSSYPURPURIN SD WOI
 GUAIENE 10,200 EO HHB
 HERBACITRIN FL HHB
 HEXATRIACONTANE LF HHB
 HIRSUTRIN FL HHB
 ALPHA-HUMULENE 25,400 EO HHB
 INOSITOL 3,400 SD WOI
 IRON-OXIDES 200-300 SD WOI
 ISOASTRAGALIN PL HHB
 ISOQUERCITRIN FL HHB
 KAEMPFEROL FL HHB
 LACTIC-ACID SD WOI
 L-LIMONENE PL HHB
 LINOLEIC-ACID 72,480-104,328 SD WOI
 MAGNESIUM-OXIDE 4,400-5,600 SD
 WOI
 MANGANESE-OXIDE 300-400 SD WOI
 MYRCENE PL HHB
 MYRISTIC-ACID 2,240-6,830 SD WOI
 NIACIN 16 SD WOI
 NICOTIFLORIN PL HHB
 OCIMENE PL HHB
 OCTACOSANOL PL HHB
 OLEIC-ACID 36,640-61,270 SD WOI
 PALMITIC-ACID 31,840-48,438
 PANTOTHENIC-ACID 11 SD WOI
 PECTINS 4,100 SD WOI
 alpha-PHELLANDRENE PL HHB
 beta-PHELLANDRENE PL HHB
 PHOSPHORUS-OXIDES 10,300-13,300 SD
 WOI
 ALPHA-PINENE PL HHB
 POTASSIUM-OXIDE 9,400-10,700 SD
 WOI
 PROTEIN 144,400-197,800 SD WOI
 PYRIDOXINE 0.9 SD WOI
 QUERCETIN PL JLS58:141
 QUERCETIN-3-GLUCOSIDE FL HHB
 QUERCETIN-3-SOPHOROSIDE FL HHB
 QUERCIMERITRIN FL HHB
 RAFFINOSE SD WOI
 RIBOFLAVIN 2.3 SD WOI
 RUTIN PL HHB
 SALICYLIC-ACID RT JFM
 SEROTONIN FR HHB
 SILICON-OXIDE 1,200-3,900 SD WOI

BETA-SITOSTEROL SD WOI
 SODIUM-OXIDE 500-1,400 SD WOI
 STEARIC-ACID 1,760-5,589 SD WOI
 SUGARS 72,900 SD WOI
 SULFUR-OXIDE 1,700-2,800 SD WOI
 TANNIN 17,700 ST HHB
 THIAMIN 3.2 SD WOI
 TOCOPHEROLS 900 OI WOI
 TRIACONTANOL LF HHB
 WATER 67,700-87,700 SD WOI

GRINDELIA SQUARROSA (PURSH) DUNAL

“GUMWEED”

“ROSINWEED”

ASH 34,000 SD CRC
 BORNEOL EO CRC
 EO 3,000 PL CRC
 FAT 196,000 SD CRC
 GRINDELIC-ACID RE CRC
 GRINDELIN PL CRC
 LUTEOL PL JSG
 MATRICARIANOL PL CRC
 MATRICARIANOL-ACETATE PL CRC
 3-METHYLKAMFEROL PL JSG
 3-METHYLQUERCETOL PL JSG
 P-OXYBENZOIC-ACID PL CRC
 OXYGRINDELIC-ACID RE CRC
 6-OXYGRINDELIC-ACID RE CRC
 7ALPHA,8ALPHA-
 OXYDIHYDROGRINDELIC-ACID RE
 CRC
 PROTEIN 138,000 SD CRC
 QUERCETOL PL JSG
 RESIN 200,000 PL CRC
 TANNINS PL CRC

GUAIACUM SP

“GUAIAIC”

CRESOL RE HHB
 3BETA,20-DIHYDROXY-30-NOROLEAN-
 12-EN-28-OIC-ACID PL JSG
 EO 50,000-60,000 WD HHB
 FUROGUAIAICIDIN RE 411/
 FUROGUAIAICIN RE 411/
 FUROGUAIAOXCIDIN RE 411/
 24-O-BETA-D-
 GLUCOPYRANOSYLOFFICIGENIN
 PL JSG
 GUAIAOL WD HHB
 GUAIACENE RE HHB

GUAIACOL RE HHB
 GUAIACONIC-ACID RE HHB
 GUAIAGUTIN RE 411/
 GUAIARETIC-ACID RE HHB
 GUAIASAPONIN RE 411/
 GUAIAZULENE WD HHB
 GUAIENE RE HHB
 GUAIGUTTIN WD HHB
 GUAIOXIDE WD HHB
 (-)-HYDROGUAIARETIC-ACID RE 411/
 MESO-DIHYDROGUAIARETIC-ACID RE
 HHB
 BIS-METHYLENEQUINONE RE HHB
 OFFICIGENIN PL JSG
 RESIN 200,000 WD HHB
 SAPONIN WD HHB
 TANNIN WD HHB
 VANILLIN WD HHB

***GUAREA RUSBYI* (BRITT.)
 RUSBY**

“COCILLANA”

ALPHA-AMYRIN PL HHB
 ANTHRAQUINONES PL 411/
 ASH 75,000 BK HHB
 FAT 25,000 BK HHB
 RESIN 23,000 BK HHB
 RUSBYINE PL 411/
 BETA-SITOSTEROL PL HHB
 TANNIN BK HHB

***GUAZUMA ULMIFOLIA* LAM.**

“BAY CEDAR”

CAFFEINE LF JFM
 MUCILAGE FR WOI
 FRIEDELIN-3ALPHA-ACETATE PL JSG
 FRIEDELIN-3BETA-OL PL JSG
 BETA-SITOSTEROL PL JSG

***HAMAMELIS VIRGINIANA* L.**

“WITCH HAZEL”

ACETALDEHYDE 160 LF HHB
 AFZELIN LF HHB
 ALCOHOLS 2,000 LF HHB
 ASTRAGALIN LF HHB
 CATECHIN-3-GALLATE BK HHB
 CATECHIN-TANNIN LF 411/
 CHOLINE 2,000 LF HHB
 ELLAGITANNIN BK HHB
 EO 5,000 LF HHB
 L-EPICATECHIN BK 411/

L-EPIGALLOCATECHIN BK 411/
 ESTERS 750 LF HHB
 GALLIC-ACID 54,400 LF HHB
 D-GALLOCATCHEIN BK 411/
 GALLOTANNIN LF 411/
 HAMAMELIDINE LF HHB
 HAMAMELIN 160,000 BK HHB
 HAMAMELIN 70,000 LF HHB
 HAMAMELITANNIN 10,000-30,000 BK
 HHB
 HAMAMELITANNIN 80,000 LF HHB
 HAMAMELOSE LF HHB
 N-HEXEN-2-AL 485 LF HHB
 ALPHA-IONONE 175 LF HHB
 BETA-IONONE 50 LF HHB
 ISOQUERCITRIN LF HHB
 KAEMPFEROL LF HHB
 LEUCOCYANIDIN LF HHB
 LEUCODELPHINIDIN LF HHB
 6-METHYLHEPTADIEN-3,5-ON(2) 25 LF
 HHB
 MYRICETIN LF HHB
 MYRICETIN-3-GLUCOSIDE LF HHB
 PHENOL BK HHB
 PHLOBAPHENE BK HHB
 QUERCETIN LF HHB
 QUERCITRIN LF HHB
 QUINIC-ACID LF HHB
 SAFROLE 10 LF HHB
 SAPONINS LF HHB
 SPIRAEOSIDE LF HHB
 TANNINS 10,000-70,000 LF 411/
 TANNINS 80,000-100,000 LF 411/

***HAMELIA PATENS* JACQ.**

“SCARLET BUSH”

ISOMARUQUINE PL JSG
 ISOPTEROPODINE PL JSG
 MARUQUINE PL JSG
 PALMIRINE PL JSG
 PTEROPODINE PL JSG
 RUMBERINE PL JSG
 SENECIOPHYLLINE PL JSG
 STIGMAST-4-ENE-3,6-DIONE PL JSG
 TANNIN 150,000 BK JFM

HARPAGOPHYTUM

***PROCUMBENS* DC.**

“DEVIL’S CLAW; GRAPPLE PLANT”

ACETOSIDE RT ABS
 ALUMINUM 939 RT PED 1/

BIOSIDE RT ABS
 CALCIUM 6,060 RT PED
 CHLOROGENIC-ACID RT ABS
 CHROMIUM 12 RT PED
 CINNAMIC-ACID RT ABS
 COBALT 145 RT PED
 Fisetin RT ABS
 FRUCTOSE RT HHB
 GLUCOSE RT HHB
 HARPAGIDE RT HHB
 HARPAGOQUINONE RT ABS
 HARPAGOSIDE RT HHB
 IRON 2,900 RT PED
 ISOACETOSIDE RT ABS
 KAEMPFEROL RT ABS
 LUTEOLIN RT ABS
 MAGNESIUM 5,440 RT PED
 MANGANESE 77 RT PED
 OLEANOLIC-ACID RT ABS
 PHOSPHORUS 707 RT PED
 POTASSIUM 9,910 RT PED
 PROCUMBIDE RT HHB
 PROTEIN 102,000 RT PED
 RAFFINOSE 3,000 RT HHB
 SELENIUM 15 RT PED
 SILICON 43 RT PED
 SODIUM 718 RT PED
 STACHYOSE 6,000-8,000 RT HHB
 SUCROSE RT HHB
 TIN 24 RT PED
 WATER 792,000 RT PED
 ZINC 18 RT PED

HEDEOMA DRUMMONDII
BENTH.

“DRUMMOND’S PENNYROYAL”

BORNEOL 1-3,800 PL BML
 CAMPHENE 0-900 PL BML
 CAMPHOR 1-786 PL BML
 1,8-CINEOLE 1-2,342 PL BML
 CITRONELLAL 228-2,180 PL BML
 EO 10,000 PL ///
 GERANIAL 3,065-5,150 PL BML
 ISOMENTHONE 13-3,809 PL BML
 ISOPULEGONE 0-320 PL BML
 LIMONENE 1-410 PL BML
 MENTHOL 10 PL BML
 MENTHONE 1-126 PL BML
 MYRCENE 6-232 PL BML
 NERAL 36-2,690 PL BML
 TRANS-OCIMENE 1-606 PL BML
 BETA-PHELLANDRENE 9-31

ALPHA-PINENE 7-6,780 PL BML
 BETA-PINENE 0-540 PL BML
 PULEGONE 5,500-7,240 PL BML
 SABINENE TR PL BML
 SABINENE-HYDRATE 20-127 PL BML
 TERPINEN-4-OL 100 PL BML

***HEDEOMA HISPIDA* PURSH.**

“HISPID PENNYROYAL”

BORNEOL 214 PL BML
 BORNYL-ACETATE 94 PL BML
 CAMPHENE 66 PL BML
 CARYOPHYLLENE 474 PL BML
 P-CYME NE 10 PL BML
 EO 2,000 PL BML
 GERMACRENE-D 354 PL BML
 LIMONENE 36 PL BML
 MYRCENE 164 PL BML
 CIS-OCIMENE 4 PL BML
 TRANS-OCIMENE 48 PL BML
 1-OCTEN-3-YL-ACETATE 36 PL BML
 ALPHA-PINENE 18 PL BML
 BETA-PINENE 22 PL BML
 SABINENE 4 PL BML
 TERPINOLENE 4 PL BML

***HEDEOMA PULEGIOIDES* (L.)**

PERS

“AMERICAN PENNYROYAL”

ACETIC-ACID PL HHB
 BUTYRIC-ACID PL HHB
 CARYOPHYLLENE 30-150 PL BML
 1,8-CINEOLE 6-30 PL BML
 DECYLIC-ACID PL HHB
 DIOSMIN 10,000 PL HHB
 DIPENTENE PL HHB
 EO 6,000-30,000 PL HHB
 TRANS-BETA-FARNESENE TR PL
 BML
 FORMIC-ACID PL HHB
 GERMACRENE-D 36-180
 ALPHA-HUMULENE 30-150
 ISOHEPTYLIC-ACID PL HHB
 ISOMENTHONE 48-9,300
 LIMONENE 36-570
 LINALYL-ACETATE 36-180
 MENTHOFURAN 1
 MENTHOL 6-30
 (-)-MENTHONE 36-420
 METHYLCYCLOHEXANONE
 METHYL-SALICYLATE ? PL HHB

MYRCENE 30-150
 3-OCTANOL 18-90
 1-OCTEN-3-OL 48-240
 3-OCTYL-ACETATE 18-90
 OCTYLIC-ACID
 ALPHA-PINENE 24-210
 BETA-PINENE 12-180
 PIPERITONE 12-270
 PIPERITENONE 1-1,410
 PULEGONE 3,678-27,600
 SABINENE 18-90
 SALICYLIC-ACID
 TANNIN

Mostly from BML

HEDEOMA REVERCHONII GRAY

“REVERCHON’S PENNYROYAL”

BORNEOL 2,528 PL BML
 CAMPHENE 460 PL BML
 CAMPHOR 31 PL BML
 1,8-CINEOLE 447 PL BML
 EO 10,000 PL ///
 ISOPULEGONE 422 PL BML
 LIMONENE 368 PL BML
 MYRCENE 461 PL BML
 ALPHA-PINENE 525 PL BML
 BETA-PINENE 651 PL BML
 SABINENE 651 PL BML
 TERPINEN-4-OL 422 PL BML
 GAMMA-TERPINENE 509 PL BML
 TERPINOLENE 222 PL BML

/// EO content assumed to be 1%

HEDERA HELIX L.

“IVY”

ARABINOSE LF HHB
 CHLOROGENIC-ACID PL HHB
 P-COUMARIC-ACID PL HHB
 BETA-ELEMENE LF HHB
 ELIXEN PL HHB
 EMETINE PL HHB
 FALCARINONE ST HHB
 FAT 351,000 SD CRC
 D-GALACTOSE FR HHB
 GERMACRENE-B PL HHB
 HEDERACOSIDES PL HHB
 HEDERAGENIN LF HHB
 ALPHA-HEDERIN LF HHB
 BETA-HEDERIN LF HHB

ISOCHLOROGENIC-ACID PL HHB
 ISOQUERCITRIN ST HHB
 KAEMPFEROL-3-RHAMNOGLUCOSIDE
 TW HHB
 LINOLEIC-ACID 45,630 SD CRC HHB
 MALIC-ACID PL HHB
 OLEANOLIC-ACID LF HHB
 OLEIC-ACID 70,200 SD CRC HHB
 PALMITIC-ACID 17,550 SD CRC HHB
 PETROSELENIC-ACID SD HHB
 POLYACETYLENES PL 411/
 PROTEIN 162,000 SD CRC
 RESIN PL HHB
 RHAMNOSE LF HHB
 RUTIN ST HHB
 SCOPOLIN PL HHB
 ALPHA-TOCOPHEROL LF CCO

HEIMIA SALICIFOLIA L.

“SINICUICHI”

ABRESOLINE PL CRC
 ALKALOIDS 18,000 SH HHB
 ANELISINE PL CRC
 CRYOGENINE SH ALK
 DEHYDRODECODINE PL CRC
 DEMETHYLLASUBIN PL JSG
 ELLAGIC-ACID LF HHB
 FAT 287,000 SD CRC
 HEIMIDINE SH HHB
 HEIMINE SH ALK
 LYFOLINE SH ALK
 LYTHRIDINE PL ALK
 LYTHRINE PL CRC
 6"-O-METHYLVERTICILLATINE PL
 HHB
 NESODINE SH ALK
 PROTEIN 216,000 SD CRC
 SAPONINS PL HHB
 SINICUICHINE LF CRC
 SININE SH ALK
 VERTINE SH ALK

HELIANTHUS ANNUUS L.

“SUNFLOWER”

ABSCISIC-ACID SD NAP
 TRANS-ABSCISIC-ACID SD NAP
 ACETIC-ACID-ETHYL-ESTER FL NAP
 ACETOIN FL NAP
 ACONITIC-ACID LF RAA
 AGROPHYLLIN-A LF RAA
 AGROPHYLLIN-B LF RAA

- ALANINE 11,800 SD JEL
 ALPHA-AMYRIN SD NAP
 BETA-AMYRIN SD NAP
 1,2-ANHYDRIDO-NIVEUSIN-A 228 LF NAP
 1,2-ANHYDRIDO-4,5-DIHYDO-NIVEUSIN-A 161 LF NAP
 ANNUTHRIN LF CCO
 ANNUTHRIN 40 SH NAP
 ARABINOSE SD NAP
 ARGININE 25,400-82,000 SD JEL
 ARGOPHYLLIN-A LF NAP
 ARGOPHYLLIN-B 176 LF NAP
 ARNIDIOL FL NAP
 ARTEMISIA-KETONE FL RAA
 ASH 26,000-49,300 SD JEL WOI
 ASPARTIC-ACID 25,800 SD JEL
 DELTA-7-AVENASTEROL SD RAA
 AYAPIN RT NAP
 BEHENIC-ACID FR RAA
 BENZOIC-ACID-PENTYL ESTER FL NAP
 BORNEOL FL NAP
 BORNEOL-ACETATE FL NAP
 BRASSICASTEROL PO NAP
 BRASSINOLIDE PO NAP
 BREIN SH RAA
 DELTA-CADINOL FL NAP
 CAFFEIC-ACID 4 PO NAP
 CAFFEIC-ACID 1,600-1,800 SD CRC(FNS) JAF38:2103
 CALCIUM 1,226 SD JEL
 CALENDULADIOL SG RAA
 CAMPESTEROL SD NAP
 CAMPEST-7-EN-BETA-OL SD NAP
 CAMPHENE EO NAP
 CAMPHOLENAL FL NAP
 CAMPHOR FL RAA
 CAPRIC-ACID SD RAA
 CAPROIC-ACID-METHYL-ESTER FL NAP
 CARBOHYDRATES 133,000-213,000 SD JEL WOI
 BETA-CAROTENE 0-0.3 SD JEL
 CASTASTERONE PO NAP
 CELLULOSE FR NAP
 CEPHALIN 615-1230 SD WOI
 CHLOROGENIC-ACID 1,900-28,000 SD CRC(FNS) WOI
 CHOLESTEROL 1,500 SD WOI
 CHOLINE 1,200 SD NAP
 CILIARIC-ACID LF NAP
 1,8-CINEOLE FL RAA
 CINNAMIC-ACID SD RAA
 TRANS-CINNAMIC-ACID 500-700 SD CRC(FNS)
 CITRAL FL RAA
 CITRIC-ACID 1,900 SD WOI
 COPPER 18-19 SD JEL
 P-COUMARIC-ACID 11 PO NAP
 P-COUMARIC-ACID? 900-1,100 SD CRC(FNS)
 CRYPTOXANTHIN FL RAA
 CUMIN-ALCOHOL FL NAP
 CUTIN FL NAP
 CYCLOARTENOL SD NAP
 P-CYMENE FL RAA
 CYSTEINE 4,765-16,000 SD JEL
 DAUCIC-ACID PL CCO
 DAUCOSTEROL SD NAP
 DECA-2,5-DIEN-1-AL FL NAP
 5-DEHYDRO-AVENASTEROL SD NAP
 7-DEHYDRO-AVENASTEROL SD NAP
 23-DEHYDRO-CAMPESTANOL PO NAP
 23-DEHYDRO-CHOLESTEROL PO NAP
 25-DEHYDRO-SITOSTANOL PO NAP
 23-DEHYDRO-BETA-SITOSTEROL PO NAP
 DEMETHOXY-ENCECALIN 10 RT NAP
 DEMETHOXY-ENCECALOL 19 RT NAP
 4,5-DIHYDRO-8,9-DEHYDRO-THEASPIRONE FL NAP
 4,5-DIHYDRO-NIVEUSIN-A LF NAP
 DIHYDRO-PHASEIC-ACID SD NAP
 DIOXINDOLE-3-ACETIC-ACID SD NAP
 N-DOCOSANE SD NAP
 ECHINOCYSTIC-ACID FL RAA
 N-EICOSANE SD NAP
 ENT-ATISAN-16-ALPHA-OL FL NAP
 ENT-ATISAN-16-BETA-OL FL NAP
 ENT-15-BEYERAN-19-OIC-ACID FL RAA
 ENT-ISO-KAUR-15(16)-EN-19-OIC-ACID LF RAA
 (-)-ENT-KAURAN-16-BETA-OL FL NAP
 (-)-ENT-KAURAN-16-BETA-19-DIOL FL NAP
 ENT-KAUR-16-EN-19-AL LF NAP
 (-)-ENT-KAUR-16-EN-19-OIC-ACID ST NAP
 (-)-ENT-KAUR-16-EN-19-OIC-ACID-THUJANOL-ESTER FL NAP
 ENT-TRACHYLOBAN-19-AL FL NAP
 EO FL RAA
 ERYTHRODIOL SH RAA
 3-ETHOXYNIVEUSIN-A LF RAA
 3-ETHOXY-NIVEUSIN-B 11 LF NAP
 24-ETHYLLATHOSTEROL SD RAA
 24-ETHYL-CHOLESTEROL SD RAA

- 24-ETHYL-TRANS-22-
DEHYDROCHOLESTEROL SD RAA
- 24-ETHYL-24(25)-
DEHYDROLATHOSTEROL SD RAA
- 24Z-ETHYLIDENECHOLESTEROL SD
RAA
- 24Z-ETHYLIDENELATHOSTEROL SD
RAA
- EUGENOL FL NAP
- FARADIOL 7,800 FL NAP
- FAT 222,000-523,800 SD JEL WOI
- FERULIC-ACID 2-3 PO NAP
- FIBER 44,000-323,000 SD JEL WOI
- FRUCTOSE FL NAP
- FUMARIC-ACID LF RAA
- GALACTOSE FL NAP
- GALACTURONIC-ACID FL NAP
- GERANIOL-ACETONE FL NAP
- GIBBERELLINS SD NAP
- GLUCOSE SD NAP
- GLUTAMINIC-ACID 58,900 SD JEL
- GLYCEROL-ALPHA-MONOPALMITATE
102 PO NAP
- GLYCINE 15,400 SD JEL
- GLYCOLATE-OXIDASE CY NAP
- GOSSYPOL? 10 SD NAP
- GRANDIFLORIC-ACID FL RAA
- HELIANTHOSIDES FL RAA
- HELIANTRIOLS PL JSJ
- HELIANTRIOL-B 700 FL NAP
- HELIANTRIOL-C 100 FL NAP
- HELIANTRIOL-F 5 FL NAP
- HEMICELLULOSE FL NAP
- N-HENEICOSANE SD NAP
- N-HENTRIACONTANE SD NAP
- N-HEPTACOSANE SD NAP
- N-HEPTADECANE SD NAP
- N-HEXACOSANE SD NAP
- N-HEXADECANE SD NAP
- HEXAHYDRO-2H-AZEPIN-2-ONE SP
RAA
- HEXAN-1-AL SD NAP
- HEX-TRANS-2-EN-1-AL FL NAP
- HISPIDULIN PL PAS
- HISTAMINE TC NAP
- HISTIDINE 6,678-20,000 SD JEL
- O-HYDROXYBENZOIC-ACID SD RAA
- P-HYDROXYBENZOIC-ACID SD RAA
- 3-HYDROXY-DEOXY-3-DEHYDRO-
FRUTICIN LF NAP
- 15-HYDROXY-DEOXY-3-DEHYDRO-
FRUTICIN LF NAP
- 15-HYDROXY-3-DEHYDRO-DEOXY-
FRUTICIN 78 LF NAP
- 17-HYDROXY-ENT-ISOKAUR-15(16)-EN-
19-OIC-ACID LF NAP
- 3-HYDROXY-3,4-SECO-DAMMARA-4,24-
DIENE 79 PO NAP
- 15-BETA-HYDROXY-TRACHYLOBAN-
19-OIC-ACID-METHYL-ESTER FL NAP
- HYMENOXIN PL PAS
- IODINE 0.042 SD WOI
- IRON 71 SD JEL
- 28-ISOAVENASTEROL SD NAP
- ISOCHLOROGENIC-ACID PL NAP
- ISOFERULIC-ACID? 1,400-1,700 SD
CRC(FNS)
- ISOFUCOSTEROL PO NAP
- ISOLIKIRITIGENIN PL PAS
- ISOLEUCINE 12,000-46,500 SD JEL
- ISOMENTHOL FL RAA
- JASMONIC-ACID SD NAP
- (-)-KAUR-16-EN-19-OIC-ACID FL NAP
- 3-KETO-15-HYDROXY-DEOXY-
FRUTICIN 45 SH NAP
- KILOCALORIES 6,022
- LACTIC-ACID LF RAA
- LECITHIN 385-2,300 SD WOI
- LEUCINE 17,500-35,500 SD JEL
- LEUCENOPINE TC NAP
- LEUCENOPINE-LACTAM TC NAP
- LIGNIN 250,000-300,000 PC RAA
- LIGNOCERIC-ACID FR RAA
- LIMONENE FL NAP
- LINALOOL FL RAA
- LINALYL-ACETATE FL RAA
- LINOLEIC-ACID 89,000-350,000 SD JAD
NAP WOI
- LOLIOLIDE FL NAP
- LUPEOL SH RAA
- LUTEIN FL NAP
- CIS-9-LUTEIN FL NAP
- CIS-9'-LUTEIN FL NAP
- LUTEIN-EPOXIDE FL NAP
- CIS-13-LUTEIN-EPOXIDE FL NAP
- CIS-13'-LUTEIN-EPOXIDE FL NAP
- CIS-5,6-LUTEIN-EPOXIDE FL NAP
- TRANS-5,6-LUTEIN-EPOXIDE FL NAP
- ALL-TRANS-LUTEIN-EPOXIDE FL RAA
- LYSINE 9,900 SD JEL
- MAGNESIUM 3,740-5176 SD JEL WOI
- MALIC-ACID LF RAA
- MALONIC-ACID LR RAA
- MALTOSE FL NAP
- MANGANESE 21 SD JEL
- MELOBIOSE FL NAP
- MENTHOL 235,000-310,000 EO(FL) NAP
- METHIONINE 5,220-20,500 SD JEL

- 1-METHOXY-4,5-DIHYDO-NIVEUSIN-A
 207 LF NAP
 METHYL-ACETATE FL RAA
 24-METHYL-CHOLESTEROL SD RAA
 24-METHYL-TRANS-22-
 DEHYDROCHOLESTEROL SD RAA
 1-O-METHYL-4,5-DIHYDO-NIVEUSIN-A
 207 LF NAP
 1-O-METHYL-HEMI-KETAL-4,5-DIHYDO-
 NIVEUSIN-A 207 LF NAP
 24-METHYLENE-CHOLESTANOL PO
 NAP
 24-METHYLENE-CHOLESTEROL PO
 NAP
 24-METHYLENE-25-
 METHYLCHOLESTEROL SD RAA
 24-METHYLENE-CYCLOARTENOL PL
 PAS
 24-METHYLLATHOSTEROL SD RAA
 2-METHYL-PROPAN-1-OL FL NAP
 MUFA 100,000 SD JEL
 MYRISTIC-ACID 500-900 SD JEL RAA
 MYRTENAL FL NAP
 NEOCHLOROGENIC-ACID SD NAP
 NIACIN 48 SD JEL
 NIVEUSIN-B LF NAP
 NIVEUSIN-C 114 LF NAP
 N-NONACOSANE SD NAP
 N-NONADECANE SD NAP
 NUCLEIN 5,100 SD WOI
 N-OCTADECANE SD NAP
 OLEANOLIC-ACID FL RAA
 OLEIC-ACID 36,000-178,000 SD JAD NAP
 WOI
 PALMITIC-ACID 14,250-32,000 SD JAD
 JEL NAP
 PECTIN 110,000 PL RAA
 PECTOLINARIGENIN PL PAS
 N-PENTACOSANE SD NAP
 PENTAN-2-ONE SD NAP
 PENTOSANS 240,000-290,000 PC RAA
 PERILLYL-ACETATE FL NAP
 PHENYLACETALDEHYDE FL NAP
 PHENYLALANINE 12,400-48,000 SD JEL
 PHOSPHATIDYL-CHOLINE SD NAP
 PHOSPHATIDYL-ETHANOLAMINE SD
 NAP
 PHOSPHATIDYL-SERINE SD NAP
 PHOSPHORUS 7,449 SD JEL
 PHYTIC-ACID SD NAP
 PHYTIN SD WOI
 PHYTOSTEROLS 5,642 SD JEL
 ALPHA-PINENE PL PAS
 BETA-PINENE FL RAA
 POTASSIUM 7,280 SD JEL
 PROLINE 12,500 SD JEL
 PROPIOVANILLONE FL NAP
 PROTEIN 135,000-240,700 SD JEL
 PUFA 345,900 SD JEL
 QUERCETIN 100-400 FL NAP
 QUERCETIN 60-210 LF NAP
 QUERCETIN-3-GLUCOSIDE FL RAA
 QUERCETIN-7-O-BETA-D-GLUCOSIDE
 22 PO NAP
 QUINIC-ACID SD JAF38:2103
 RAFFINOSE PC NAP
 RHAMNOSE SD NAP
 RIBOFLAVIN 2-3 SD JEL
 RUBBER 5,500 LF NAP
 RUBBER 2,600 SH NAP
 SABINENE FL RAA
 SABINOL FL NAP
 SCOPOLETIN PL PAS
 SERINE 11,400 SD JEL
 SFA 54,900 SD JEL
 SHIKIMIC-ACID SD NAP
 SINAPIC-ACID? 4,800-5,700 SD CRC(FNS)
 BETA-SITOSTEROL SD PAS
 SODIUM 32 SD JEL
 SQUALENE SD WOI
 STACHYOSE SD NAP
 STEARIC-ACID 9,000-28,000 SD JAD JEL
 NAP
 7,24-STIGMASTADIEN-3BETA-OL PL
 JSG
 STIGMASTEROL SD NAP
 STIGMAST-7-EN-3-BETA-OL SD NAP
 SUCCINIC-ACID LF NAP
 SUCROSE FL NAP
 SULFUR 2,574-4,880 SD JEL WOI
 SYRINGIC-ACID SD RAA
 TARAXASTEROL SH RAA
 TARAXANTHIN FL RAA
 TARTARIC-ACID 1,900 SD WOI
 ALPHA-TERPINENE FL RAA
 TERPINEN-1-EN-4-OL FL NAP
 ALPHA-TERPINEOL FL NAP
 TERPINYL-ACETATE FL RAA
 N-TETRACOSANE SD NAP
 6-ALPHA,7-ALPHA-17-TETRAHYDROXY
 ENT-16-ALPHA-(H)-KAURAN-19-OIC-
 ACID
 THIAMIN 24 SD JEL
 THREONINE 9,806 SD JEL
 TIGITANIN-A LF RAA
 TOCOPHEROL 34,000 SD JEL
 ALPHA-TOCOPHEROL 622 OI TOT
 DELTA-TOCOPHEROL OI NAP

GAMMA-TOCOPHEROL 27 OI TOT
 TRACHYLOBAN-19-OIC-ACID FL NAP
 (-)-TRACHYLOBAN-19-OIC-ACID-
 THUJANOL-ESTER FL NAP
 12N-TRICOSANE SD NAP
 N-TRIDEC-2-ONE FL NAP
 7-ALPHA,16-BETA-17-TRIHYDROXY
 ENT-16-BETA-(H)-KAURAN-19-OIC-
 ACID
 7-ALPHA,16-BETA-17-TRIHYDROXY
 ENT-16-BETA-(H)-KAURENOIC-ACID
 SD TRYPTOPHAN 7,037-15,900 SD JEL
 TYROSINE 7,037 SD JEL
 URONIC-ACID 65,000-77,600 PC RAA
 VALINE 13,900-50,000 SD JEL
 VANILLIN FR RAA
 VANILLIN 0.9 RT NAP
 VERBENONE FL NAP
 VIOLAXANTHIN FL NAP
 CIS-13-VIOLAXANTHIN FL NAP
 WATER 72,900 SE JEL
 WAX 4,200-4,600 PC RAA
 CIS-XANTHOSIN FL NAP
 ZINC 53-54 SD JEL

HELIANTHUS TUBEROSUS L.

“JERUSALEM ARTICHOKE”

ALANINE 2,573 TU 457/
 ARGININE 11,627 TU 457/
 ASCORBIC-ACID 40-306 TU CRC
 ASH 11,000-115,500 TU CRC JEL
 ASPARTIC-ACID 16,852 TU 457/
 BETAINE TU WOI
 2,7(14),9-BISABOLATRIEN-11-OL PL JSG
 BORON 3 RT BOB
 CALCIUM 140-9,600 TU CRC 456/
 CARBOHYDRATE 165,000-847,000 TU
 CRC
 CATALASE TU WOI
 BETA-CAROTENE 0-6 TU CRC
 CHOLINE TU WOI
 COPPER 8-30 456/
 CYSTINE-(HALF) 1,715 TU 457/
 DILEVAN TU WOI
 ENT-12-ACETOXY-16-KAUREN-19-OIC-
 ACID PL JSG
 FAT 4550-5,000 TU CRC JEL
 (-73,000 457/)
 FIBER 8,000-59,000 TU CRC
 GLUCOSE TU WOI
 GLUTAMIC-ACID 26,493 TU 457/
 GLYCINE 2,478 TU 457/
 HELIANGINE PL JSG

HELIANTHIN TU WOI
 HEMICELLULOSE 7,000 TU JEL
 HISTIDINE 1,906 TU 457/
 INULASE TU WOI
 INULENIN TU WOI
 INULIN TU WOI
 IODINE 0.012 TU WOI
 IRON 6-168 TU CRC
 ISOLEUCINE 3145 TU 457/
 KILOCALORIES 70-3,520 TU CRC
 LEUCINE 4,384 TU 457/
 LEVULOSE TU WOI
 LYSINE 4,288 TU 457/
 MAGNESIUM 600-1,800 TU 456/
 MANGANESE 3-228 TU JEL 456/
 METHIONINE 858 TU 457/
 NIACIN 1-64 TU CRC
 PHENOLASE TU WOI
 PHENYLALANINE 2,668 TU 457/
 PHOSPHATASE TU WOI
 PHOSPHORUS 660-5,200 TU 456/
 POLYPHENOLASE
 POTASSIUM 3,820-39,700 TU CRC 456/
 PROLINE 2,573 TU 457/
 PROTEIN 18,000-132,000 TU CRC JEL
 456/
 RIBOFLAVIN 0.5-3 TU CRC
 SERINE 2,954 TU 457/
 SODIUM 140-2,400 TU 456/
 STARCH 262,600 TU 457/
 SUGAR 516,500 TU 457/
 SYNANTHRIN TU WOI
 THIAMIN 2-10 TU CRC
 THREONINE 3,431 TU 457/
 TRYPTOPHAN 1,811 TU 457/
 TYROSINE 1715 TU 457/
 VALINE 4,098 TU 457/
 WATER 370,000-860,000 TU CRC JEL
 456/
 ZINC 16-64 TU 456/

HELICHRYSUM

ANGUSTIFOLIUM DC.

“EVERLASTING; IMMORTELLE”

ACETIC-ACID PL GEO
 ALCOHOLS 583-2,331 PL BML
 CAPRYLIC-ACID PL GEO
 CAFFEIC-ACID PL HHB
 BETA-DIKETONES PL HHB
 5,7-DIMETHOXYPHTHALIDE PL HHB
 2,4-DIMETHYLHEPTAN-3,5-DIONE PL
 BML

3,5-DIMETHYLOCTAN-4,6-DIONE PL
BML
EO 750-2,000 PL GEO HHB
ESTERS 480-1,920 PL BML
EUGENOL PL HHB
FRACTION-H CORTISONIC PL HHB
GNAPHALIIN PL HHB
HELIPYRONE PL HHB
ISOVALERIC-ACID PL GEO
LINALOOL PL BML
5-METHOXY-7-HYDROXYPRTHALIDE
PL HHB
NEROL 225-1,000 PL GEO HHB
NERYL-ACETATE PL GEO
NERYL-CAPRYLATE PL HHB
NERYL-ISOVALERATE PL HHB
D-ALPHA-PINENE PL GEO
BETA-PINENE PL HHB
BETA-SITOSTEROL FL ST HHB
URSOLIC-ACID FL ST HHB
URSOLIC-ACID-LACTONE PL HHB
UVAOL PL HHB

HELIOTROPIMUM EUROPAEUM L.

"HELIOTROPE"

"TURNSOLE"

ACETYLLASIOCARPINE PL JSG
ANGELIC-ACID SH HHB
CYNOGLOSSINE SD ALK
ECHINATINE? PL HHB
EUROPINE 140 PL ALK HHB
EUROPINE-N-OXIDE 4,000 PL ALK
HHB
FAT 238,000 SD CRC
HELEURINE PL ALK
HELEURINE-N-OXIDE 1,100 PL ALK
HHB
HELIOSUPINE? PL HHB
HELIOTRIDINE SH ALK
HELIOTRIDINE-N-OXIDE 7,400 SH HHB
HELIOTRINE 270 SH ALK HHB
ISOHELIOTRINE PL JSG
LASIOTROPINE 140SH ALK HHB
LASIOTROPINE-N-OXIDE 3,600 SH
ALK
OCTADECATETRAENOIC-ACID RT
HHBT
PROTEIN 209,000 SD CRC
RETRONECINE? PL HHB
SUPINIDINE? PL HHB
SUPININE SH ALK
SUPININE-N-OXIDE PL HHB

HELIOTROPIMUM INDICUS (L.)

R. BR.

"INDIAN HELIOTROPE"

ACETYL-INDICINE PL HHB
ALKALOIDS 90-800 PL HHB
ALKALOID OXIDES 450-3,450 PL HHB
CAMPESTEROL PL JSG
CHALINOSTEROL PL JSG
HELIOTRINE SD MPI
INDICINE PL HHB
INDICINE-N-OXIDE PL JFM
INDICININE PL HHB
RETRONECINE PL ALK
BETA-SITOSTEROL PL JSG
STIGMASTEROL PL JSG
TANNINS PL JFM
(-)-TRACHELANTHINIC-ACID PL HHB

HELEBORUS NIGER L.

"BLACK HELLEBORE"

"CHRISTMAS ROSE"

ACONITIC-ACID RH HHB
DESGLUCOHELLEBRIN RH HHB
FAT 352,000 SD CRC
GLUCOSE RH HHB
HELLEBORIN RH HHB
HELLEBRIGENIN RH HHB
HELLEBRIN RH HHB
KAEMPFEROL-3,7-DIGLUCOSIDE FL
HHB
KAEMPFEROL-3-SAMBUBIOSIDE FL
HHB
KAEMPFEROL-3-SAMBUBIOSIDE-7-
GLUCOSIDE FL HHB
KAEMPFEROL-3-SOPHOROSIDE FL
HHB
PROTEIN 212,000 SD CRC
L-RHAMNOSE RH HHB
SPIROST-5,15(27)-DIEN-
1BETA,3BETA,11ALPHA-TRIOL RH
HHB
STROPHANTHOBIOSE PL HHB

HEMIDESMUS INDICUS (L.)

R. BR.

"INDIAN SARSAPARILLA"

ALPHA-AMYRIN RT MPI
BETA-AMYRIN RT MPI
BETA-AMYRIN-ACETATE RT MPI

DESININE PL JSG
 EO 1,600-2,250 RT HHB WOI
 HEMIDESMOL RT HHB
 HEMIDESTEROL RT HHB
 HEXATRIACONTANE RT MPI
 HYPEROSIDE FL MPI
 ISOQUERCITIN FL MPI
 LUPEOL RT MPI
 LUPEOL-ACETATE RT MPI
 LUPEOL-OCTACOSANOATE RT MPI
 P-METHOXY-SALICYLIC-ALDEHYDE
 1,280-1,800 RT HHB WOI
 RESIN RT HHB
 RUTIN FL MPI
 SAPONINS RT WOI
 BETA-SITOSTEROL RT MPI
 TANNINS 25,000 LF MPI

HEMSLEYA AMABILIS DIELS

“LUO GUO”

HEMSLAYADIN PL DAA

HIBISCUS SABDARIFFA L.

“ROSELLE”

ACETIC-ACID FR SD CCO
 ALUMINUM 125 FL PED
 ANISALDEHYDE FR LF CCO
 ANTHOCYANINS 15,000 CX CRC
 ASCORBIC-ACID 540-3,750 FR CRC
 ASCORBIC-ACID 100-1,161 FL CRC
 ASH 6,000-77,000 FL CRC
 ASH 10,000-111,000 LF CRC
 ASPARTIC-ACID CRC
 BENZALDEHYDE FR CCO
 BENZYL-ALCOHOL FR LF CCO
 BUTYRIC-ACID FR CCO
 CALCIUM 1,100-17,400 FL CRC
 CALCIUM 2,130-14,792 LF CRC
 CALCIUM 3,200-6,000 SD CRC
 CALCIUM-OXALATE FR CRC
 CAMPESTEROL (16.5% STEROLS SD
 CRC)
 CAPRYLIC-ACID FR SD CCO
 CARBOHYDRATES 76,000-804,000 FL
 CRC
 CARBOHYDRATES 92,000-765,000 LF
 CRC
 CARBOHYDRATES 557,000 SD CRC
 BETA-CAROTENE 41-555 LF CRC
 BETA-CAROTENE 0-21 FL CRC
 CELLULOSE 168,000 SD WOI

CHOLESTEROL (5.1% STEROLS SD CRC)
 CHROMIUM 54 FL PED
 CIS-12,13-EPOXY-CIS-9-
 OCTADECENOIC-ACID
 (4.5% LIPIDS SD)
 CITRIC-ACID 37,400-170,000 FR AYL
 WOI
 COBALT 38 FL PED
 CYANIDIN-3-SAMBUBIOSIDE CX AYL
 DELPHINIDIN CX AYL
 DELPHINIDIN-3-GLUCOSIDE CX AYL
 DELPHINIDIN-3-SAMBUBIOSIDE CX
 AYL
 DELPHININ FL CCO
 ERGOSTEROL (3.2% STEROLS SD CRC)
 ETHANOL LF FR SD CCO
 FAT 1,000-110,000 FL CRC
 FAT 3,000-33,000 LF CRC
 FAT 168,000-223,000 SD CRC WOI
 FIBER 10,000-148,000 FL CRC
 FIBER 13,000-114,000 LF CRC
 FIBER 120,000 SD CRC
 FORMIC-ACID FR SD CCO
 GLYCOLIC-ACID FL HHB
 GOSSIPETIN FL CRC
 GOSSYPETIN-3-GLUCOSIDE FL RAA
 HIBISCETIN FL CRC
 HIBISCIC-ACID 153,000-23,000 FL
 CRC
 HIBISCIN FL CRC
 HIBISCIN-CHLORIDE WOI
 HIBISCRETIN FL CRC
 IRON 1-536 FL CRC PED
 IRON 15-333 LF CRC
 ISOAMYL-ALCOHOL LF FR SD CCO
 ISOPROPYL-ALCOHOL LF FR SD CCO
 LINOLEIC-ACID (14.4% LIPIDS SD CRC)
 MAGNESIUM 2,240 FL PED
 MALVALIC-ACID (1.3% LIPIDS SD CRC)
 MALIC-ACID 12,500 LF WOI
 MALIC-ACID 6,000 ST WOI
 MALIC-ACID 65,000 FL CRC
 MANGANESE 151 FL PED
 METHANOL LF FR SD CCO
 3-METHYL-1-BUTANOL LF FR SD CCO
 MUCILAGE CX WOI
 MYRISTIC-ACID (2.1% LIPIDS SD CRC)
 NIACIN 4-71 FL CRC PED 1/
 NIACIN 12-132 LF CRC
 NITROGEN 32,900 SD WOI
 OLEIC-ACID (34.0% LIPIDS SD CRC)
 OXALIC-ACID FL HHB
 PALMITIC-ACID (35.2% LIPIDS SD CRC)

PALMITOLEIC-ACID (2.0% LIPIDS SD CRC)
 PECTIN 10,200 FR WOI
 PECTIN 31,900 CX WOI
 PELARGONIC-ACID FR SD CCO
 PENTOSANS 158,000 SD WOI
 PHOSPHORUS 180-4,348 FL CRC
 PHOSPHORUS 480-6,458 LF CRC
 PHOSPHORUS 6,000 SD CRC
 POTASSIUM 9,400 FL PED
 PROPIONIC-ACID FR SD CCO
 PROTEIN 70,000-110,000 FL CRC
 PROTOCATECHUIC-ACID FL HHB
 RESIN CX AYL
 RIBOFLAVIN 0-4 FL CRC
 RIBOFLAVIN 1-31 LF CRC
 SABDARETIN FL RAAA
 SABDARITRIN FL WOI
 SAPONIN RT CRC
 SELENIUM 143 FL PED
 SILICON 91 FL PED
 BETA-SITOSTEROL (61.3% STEROLS SD CRC)
 BETA-SITOSTEROL-BETA-D-GALACTOPYRANOSIDE PL JSG
 BETA-SITOSTEROL-BETA-D-GALACTOSIDE LF CCO
 BETA-SITOSTERYL-BENZOATE LF CCO
 SODIUM 382 FL PED
 STARCH 111,000 SD WOI
 STEARIC-ACID (3.4% LIPIDS SD CRC)
 STERCULIC-ACID (2.9% LIPIDS SD CRC)
 SUCROSE 2,400 CX WOI
 SULFUR 4,000 SD CRC
 TARTARIC-ACID RT CRC
 ALPHA-TERPINYL-ACETATE FR LF SD CCO
 THIAMIN 0-3 FL CRC
 THIAMIN 0-12 LF CRC
 TIN 10 FL PED
 UTALONIC-ACID FL HHB
 WATER 845,000-882,000 FL CRC PED
 WATER 856,000 LF CRC
 WATER 76,000-129,000 SD CRC
 ZINC TR FL PED

"Fruits", really swollen calyces, are here integrated with flowers re nutrients.

HIPPOMANE MANCINELLA L.

"MANCHINEEL"

12-DEOXY-5-HYDROXYPHORBOL-6GAMMA,7ALPHA-OXIDE PL CRC

HIPPOMANINS PL CRC
 MANCINELLIN PL CRC
 PHYSOSTIGMINE? 200 FR CRC
 PHLORACETOPHENONE-2,4-DIMETHYLETHER LF CRC
 SAPOGENIN PL CRC

HOLARRHENA

ANTIDYSENTERICA (ROXB.)

WALL.

"TELLICHERRY BARK"

ALKALOIDS 2,200-42,000 BK HHB WOI
 ALKALOIDS 5,500 FL WOI
 ALKALOIDS 9,700 LF WOI
 ALKALOIDS 18,250-40,000 SD HHB WOI
 ALKALOIDS 5,200 ST WOI
 3-AMINOCONAN-5-EN BK HHB
 3ALPHA,20ALPHA-BES-(DIMETHYLAMINO)-5-PREGNEN BK HHB
 CAOTCHOUC 15,000-97,000 LX WOI
 CONAMINE BK HHB
 CONARRHIMINE BK HHB
 CONCURCHINE BK HHB
 CONCURCHININE BK HHB
 CONCURESSINE BK HHB
 CONESSIDINE BK HHB
 CONESSIMINE BK HHB
 CONESSINE 4,000-13,000 BK HHB WOI
 CONIMINE BK HHB
 DIHYDROISOCONESSIMINE BK HHB
 DIHYDROISOCONESSINE BK HHB
 3ALPHA-DIMETHYL-AMINO-5ALPHA-CONANINE BK HHB
 ERGOSTENOL BK HHB
 FAT 190,000-300,000 SD HHB WOI
 GUM 95,600 BK WOI
 HOLADYSONE BK HHB
 HOLARRHENINE BK WOI
 HOLARRHESSIMINE BK HHB
 HOLARRHIDINE BK HHB
 HOLARRHIMINE BK HHB
 HOLARRHINE BK HHB
 HOLONAMINE BK HHB
 7ALPHA-HYDROXYCONESSINE BK HHB
 ISOCONESSIMINE BK HHB
 KURCHAMINE BK HHB
 KURCHICINE BK WOI
 KURCHINE BK HHB
 KURCHOLESSINE BK HHB
 LETTOCINE BK WOI

LETTORESINOL-A LX WOI
 LETTORESINOL-B LX WOI
 LIGNOCERIC-ACID 3,610-5,700 SD WOI
 LINOLEIC-ACID 52,000-164,100 SD HHB
 WOI
 LINOLENIC-ACID 19,000 SD HHB WOI
 LUPEOL BK HHB
 N-3-METHYL-HOLARRHIMINE BK HHB
 N-20-METHYL-HOLARRHIMINE BK
 HHB
 NORCONESSINE BK WOI
 OLEIC-ACID 39,900-63,000 SD HHB WOI
 PALMITIC-ACID 10,640-16,800 SD HHB
 WOI
 RESIN 2,000 BK WOI
 BETA-SITOSTEROL BK WOI
 STEARIC-ACID 12,920 SD-20,400 HHB
 WOI
 STIGMASTADIENOL BK HHB
 TANNIN 11,400 BK HHB WOI
 TETRAMETHYLHOLARRHIMINE BK
 HHB
 TRIMETHYLCONKURCHINE BK HHB

HORDEUM VULGARE L.

"BARLEY"

ACONOTIC-ACID RT NAP
 AESCULETIN PL HHB
 AESCULIN PL NAP
 ALPHA-ALLOCRYPTOPINE RT NAP
 ALUMINUM 7 SD WOI
 ALUMINUM 212 ST PED 9/
 1-(3-AMINO-PROPYL)-PYRROLINIUM
 SP NAP
 AMMONIA(NH₃) 8,130 SD NAP
 APIGENIN-7-O-BETA-D-GLUCOSIDE LF
 NAP
 ARSENIC 0.01 SP CAL
 ASCORBIC-ACID 0 SD CRC
 ASCORBIC-ACID 3,300 ST PED 9/
 ASH 61,000-235,000 PL CCG
 ASH 9,000-132,000 SD CCG
 ASH 81,000 ST PED 9/
 1,4-BENZOQUINONE LF NAP
 BETAINE 234 RT NAP
 BETAINE 1.8 SH NAP
 BIOTIN 0.088-0.902 SD CCG
 BORON 2-6 SD BOB
 CAFFEIC-ACID SD NAP
 CALCIUM 800-10,400 PL CCG
 CALCIUM 720 SP CAL
 CALCIUM 160-4,100 SD CCG
 CALCIUM 11,000 ST PED

CALMODULIN CY NAP
 CANDICINE SP HHB
 CARBOHYDRATES 265,000-785,000 PL
 CCG
 CARBOHYDRATES 608,000-868,000 SD
 CCG
 CARBOHYDRATES 801,000 ST PED 9/
 BETA-CAROTENE 149-660 PL CCG
 BETA-CAROTENE 0-1 SD CCG
 BETA-CAROTENE 312 ST PED
 CATECHIN LF HHB
 CELLULOSE 190,000-322,000 PL CCG
 CHLOROGENIC-ACID SD HHB
 CHOLINE 928-1,617 SD CCG
 CHROMIUM 31 ST PED 9/
 CHRYSOERIOL-7-GALACTOSIDE LF
 NAP
 CHRYSOERIOL-7-O-BETA-D-GLU-
 COSIDE LF NAP
 CITRININ SD NAP
 COBALT 49 ST PED 9/
 COPPER 8 SP CAL
 COPPER 1-20 SD CCG
 (+)-CORYDINE RT NAP
 P-COUMARIC-ACID SD NAP
 COUMARIN PL HHB
 P-COUMAROYL-AGMATINE 2-3 SH
 NAP
 CYANIDIN-3-ARABINOSIDE LF HHB
 CYANIDIN-3-GLUCOSIDE LF HHB
 CYSTATHIONE 0.07 SP NAP
 CYSTINE 1,000-2,000 SD CCG
 DIAMINO-PROPANE SP NAP
 DICENTRINE RT NAP
 DIETHYL-AMINE 5.7 SD NAP
 5,7-DIHYDROXY-3',4',5'-TRIMETHOXY-
 FLAVONE SH NAP
 DIMETHYL-AMINE 1.6 SD NAP
 EPIHETERODENDRIN SP NAP
 ETHYLAMINE 3.4 SD NAP
 FAT 19,000-64,000 PL CCG
 FAT 5,000-55,000 SD CCG
 FAT 29,000 ST PED 9/
 FERULIC-ACID SD HHB
 FIBER 128,000-446,000 PL CCG
 FIBER 5,000-151,000 SD CCG
 FIBER 134,000 ST PED 9/
 FOLIC-ACID 0-1.48 SD CCG
 FRUCTOSE SD HHB
 GIBBERELLINS SP NAP
 GLAUCENTRINE RT NAP
 (+)-GLAUCINE RT NAP
 GLUCODIFRUCTOSE SD HHB
 GLUCOSE SD HHB

- GLUTAMIC-ACID 32,000-38,000 SD CCG
 GRAMINE LF NAP
 HERNIARIN PL HHB
 (R)-EPI-HETERODENDRIN SP CCO
 HEXACOSAN-1-AL LF NAP
 HEXACOSAN-1-OL LF NAP
 HORDENINE 63 SP NAP
 HORSATINE PL HHB
 HYDROXAMIC-ACID LF NAP
 P-HYDROXYBENZOIC-ACID SD
 CRC(FNS)
 O-HYDROXYCINNAMIC-ACID SD
 CRC(FNS)
 5-HYDROXY-TRANS-FERULIC-ACID PL
 NAP
 3-HYDROXY-MUGENIC-ACID RT NAP
 INDOLE-3-CARBOXYLIC-ACID SP NAP
 IRON 100 SP CAL
 IRON 40-100 SD WOI
 IRON 160 ST PED 9/
 28-ISOFUCOSTEROL SD NAP
 ISOORIENTIN LF NAP
 ISOORIENTIN-7-ARABINOSYL-
 GLUCOSIDE LF NAP
 ISOORIENTIN-7-FERULYL-GLUCOSIDE
 LF NAP
 ISOORIENTIN-7-O-BETA-D-GLUCOSIDE
 LF NAP
 ISOORIENTIN-3'-METHYL-ETHER LF
 NAP
 ISOORIENTIN-7-RHAMNOGLUCOSIDE
 LF NAP
 ISOVITEXIN LF CCO
 ISOVITEXIN-7-DIGLUCOSIDE LF NAP
 ISOVITEXIN-7-O-BETA-D-DIGLUCOSIDE
 LF NAP
 ISOVITEXIN-7-O-BETA-D-GLUCOSIDE
 LF NAP
 JASMONIC-ACID FR NAP
 LEUCOCYANIDIN LF HHB
 LIGNIN 15,000-77,000 PL CCG
 LINOLEIC-ACID 2,185-24,035 SD CCG
 LINOLENIC-ACID 22-242 SD CCG
 LUTEIN SP HHB
 LUTEOLIN-7-O-BETA-D-GLUCOSIDE LF
 NAP
 LUTONARINE PL HHB
 LUTONARINE-3'-METHYLETHER PL
 HHB
 MAGNESIUM 1,670 SP CAL
 MAGNESIUM 100-2,300 SD CCG
 MAGNESIUM 2,250 ST PED 9/
 MALTOSE SD HHB
 MANGANESE 26 SP CAL
 MANGANESE 2-120 SD CCG WOI
 MANGANESE 60 ST PED 9/
 MANNITOL RT NAP
 MERCURY 0.07 SP CAL
 METHIONINE 1,000-4,000 SD CCG
 METHYLAMINE 4.5 SD NAP
 N-METHYL-TYRAMINE SP HHB
 MUGINEIC-ACID RT CCO
 NEOXANTHIN PL HHB
 NIACIN 17-115 SD CCG
 NIACIN 106 ST PED 9/
 OCHROTOXIN-A SD NAP
 OLEIC-ACID 1,325-14,575 SD CCG
 ORIENTIN LF CCO
 ORIENTIN-7-O-GLUCOSIDE LF CCO
 ORYZANOL PL HHB
 P-OXYBENZOIC-ACID PL HHB
 P-OXYCINNAMIC-ACID PL HHB
 PALMITIC-ACID 370-4,070 SD CCG
 PALMITOLEIC-ACID LF NAP
 PANTOTHENIC-ACID 2-12 SD CCG
 PENTOSANS 83,000-239,000 PL CCG
 PHOSPHORUS 2,300-6,900 PL CCG
 PHOSPHORUS 1,890-9,200 SD CCG
 PHOSPHORUS 5,950 ST PED 9/
 PHYTIN 12,000 SD WOI
 PIPERIDINE 1 SD NAP
 PLASTOHYDROQUINONE-9 LF NAP
 PLASTOQUINONE PL HHB
 POTASSIUM 19,880-44,000 PL CCG
 POTASSIUM 6,130 SP CAL
 POTASSIUM 1,600-9,900 SD CCG CRC
 POTASSIUM 25,000 ST PED 9/
 PROCYANIDIN-B-3 SD NAP
 PRODELPHINIDIN-B-3 SD NAP
 PRODELPHINIDIN-B-3-DIMER SD
 NAP
 PROLINE 57-219 RT NAP
 PROPELARGONIDIN-DIMER SD
 NAP
 PROTEIN 25,000-344,000 PL CCG
 PROTEIN 82,000-212,000 SD CCG
 PROTEIN 89,000 ST PED 9/
 PROTOCHLOROPHYLL LF NAP
 PUTRESCINE SP NAP
 PYRIDOXINE 0-11 SD CCG
 PYRROLIDINE 0.9 SD NAP
 RAFFINOSE SD HHB
 RIBOFLAVIN 1-9 SD CCG
 RIBOFLAVIN 27-28 ST PED 9/
 SAPONARIN LF CCO
 SCOPOLETIN PL HHB
 SELENIUM 24 ST PED 9/
 SERINE 5,000 SD CCG

SILICON 34 ST PED 9/
 SILICON-DIOXIDE 5,000-9,000 SD
 WOI
 SINAPIC-ACID PL HHB
 BETA-SITOSTEROL PL PAS
 SODIUM 256 SP CAL
 SODIUM 2,240 ST PED 9/
 STARCH 620,000 SD HHB
 STEARIC-ACID 130-1,430 SD CCG
 STIGMASTEROL PL PAS
 SULFUR 200 SD WOI
 SYRINGIC-ACID PL HHB
 THIAMIN 1-10 SD CCG CRC WOI
 THIAMIN 13 ST PED 9/
 TIN 12 ST PED 9/
 TOCOPHEROLS 56-71 SD WOI
 ALPHA-TOCOPHEROL 3-11 SD CCG
 ALPHA-TOCOQUINONE SP HHB
 TRICIN SH NAP
 TRICIN-7-O-BETA-D-GLUCOSIDE LF
 NAP
 TRIGONELLINE 9 SD NAP
 TRANS-FERULIC-ACID PL PAS
 TRYPTOPHAN 1,000-3,000 SD CCG
 TYRAMINE 26 SP HHB NAP
 TYROSINE 2,000-6,000 SD CCG
 UBIQUINONE SP HHB
 UMBELLIFERONE SP HHB
 VALINE 6,000-9,000 SD CCG
 VANILLIC-ACID FR NAP
 VIOLAXANTHIN SP HHB
 VIT-K1 LF NAP
 VITEXIN-7-O-BETA-D-DIGLUCOSIDE
 LF NAP
 VITEXIN-7-RHAMNOGLUCOSIDE LF
 NAP
 WATER 883,000 PL CCG
 WATER 6,000-178,000 SD CCG
 WATER 860,000 ST PED 9/
 WAX LF NAP
 ZINC 20 SP CAL
 ZINC 20-30 SD WOI
 ZINC 21 ST PED 9/

9/PED=Pedersen; he is talking about stem
 juice where I have the ST abbreviation
 followed by PED.

HOSLUNDIA OPPOSITA VAHL

"KAMYUYE"

SESQUITERPENE-ALCOHOLS PL CRC
 SESQUITERPENES PL CRC

HOULTTUYNIA CORDATA THUNB.

"FISHWORT"

ACETALDEHYDE PL DAA
 CALCIUM 770 PL SMO
 CAMPHENE PL HHB
 CAPRIC-ACID PL DAA
 CAPRIC-ALDEHYDE PL CCO
 COPPER 26 PL SMO
 DECANOYL-ACETALDEHYDE PL
 CCO
 HYPERIN PL CCO
 IRON 500 PL SMO
 ISOQUERCITRIN PL CCO
 3-KETODECANAL PL CCO
 LAURIC-ALDEHYDE PL CCO
 MAGNESIUM 3,430 PL SMO
 MANGANESE 120 PL SMO
 METHYL-LAURYL-SULFIDE PL CCO
 METHYL-N-NONYL-KETONE PL CCO
 MYRCENE PL CCO
 ALPHA-PINENE PL HHB
 BETA-PINENE PL HHB
 POTASSIUM 54,300 PL SMO
 POTASSIUM-CHLORIDE PL CCO
 POTASSIUM-SULFATE PL CCO
 QUERCETIN PL CCO
 QUERCITRIN PL CCO
 REYNOUTRIN PL CCO
 RUTIN PL CCO
 SODIUM 212 PL SMO
 ZINC 56 PL SMO

HUMULUS LUPULUS L.

"HOPS"

ACETONE FL NAP
 ADHULUPONE PL JSG
 ADHUMULONE FR CRC
 ADLUPULONE FR CRC
 ALPHA-ALANINE FR CRC
 BETA-ALANINE FR CRC
 ALLOAROMADENDRENE 77 FR NAP
 ALLOAROMADENDRENE-EPOXIDE 12
 FR NAP
 ALLOCYMENE EO NAP
 ALUMINUM 4.7 FR PED
 ALPHA-AMINOADIPIC-ACID FR CRC
 GAMMA-AMINOBTYRIC-ACID FR
 CRC
 AMMONIA(NH₃) 10,660 FL NAP
 ARGININE FR CRC
 AROMADENDRINE 98 FR NAP

- 12AROMADENDRINE-EPOXIDE 20 FR
 NAP
 ASCORBIC-ACID 1,782 FR PED
 ASH 70,000-100,000 FR WOI
 ASPARAGINE FR CRC
 ASPARAGINIC-ACID FR CRC
 ASTRAGALIN FR CRC
 BICYCLOGERMACRENE 10 FR NAP
 BUTYLISOBUTYRATE EO HHB
 CADALENE 2 FR NAP
 ALPHA-CADINENE 10 FR NAP
 DELTA-CADINENE 60 FR NAP
 GAMMA-CADINENE 60 FR NAP
 ALPHA-CADINOL 15 FR NAP
 DELTA-CADINOL 36 FR NAP
 T-CADINOL 9 FR NAP
 CAFFEIC-ACID PL JLS58:118
 CALAMENENE 2 FR NAP
 CALCIUM 6,222 FR PED
 GAMMA-CALOCORENE PL JSG
 CAMPESTEROL ST NAP
 CANNABIDIOL LF NAP
 CARBOHYDRATES 770,000 FR PED
 BETA-CAROTENE 2.4 FR PED
 CARYOLAN-1-OL 5 FR NAP
 CARYOPHYLLA-3(12)-6-DIEN-4-OL EO
 NAP
 CARYOPHYLLA-3(8)-13-DIEN-5-ALPHA-
 OL EO NAP
 CARYOPHYLLA-3(8)-13-DIEN-5-OL EO
 NAP
 CARYOPHYLLA-4(12)-8(13)-DIEN-5-
 BETA-OL EO NAP
 ALPHA-CARYOPHYLLENE EO CCO
 BETA-CARYOPHYLLENE 520 FR CRC
 NAP
 CARYOPHYLLENE-EPOXIDE 24 FR NAP
 CARYOPHYLLENE-OXIDE 24 EO NAP
 CATECHIN FR CRC
 CELLULOSE ST CRC
 CEROTIC-ACID FR HHB
 CHLOROGENIC-ACID FR HHB
 CHOLINE FR CRC
 CHROMIUM 7 FR PED
 CITRAL FR CRC
 COBALT 24 FR PED
 COHUMULONE FR CRC
 COLUPDOX PL JSG
 COLUPOX PL JSG
 COLUPULONE FR CRC
 ALPHA-COPAENE 15 FR CRC NAP
 ALPHA-CORACALENE PL JSG
 P-COUMARIC-ACID FR HHB
 ALPHA-CUBEBENE 15
 BETA-CUBEBENE 5 FR CRC NAP
 CUBENOL 17 FR NAP
 CYANIDIN PL JLS58:118
 P-CYMENE FR CRC
 DECAN-1-AL EO NAP
 2-DECANONE
 DELPHINIDIN PL JLS58:118
 DEMETHYL-XANTHOTHUMOL FR NAP
 DEOXYCOHUMULONE PL NAP
 4-DEOXYCOHUMULONE PL NAP
 DEOXYHUMULONE FR HHB
 4-DEOXYHUMULONE FR HHB
 DIETHYLAMINE 3.1 FL NAP
 2',6'-DIMETHOXY-4,4'-DIHYDROXY-
 CHALCONE 75 FR NAP
 DIMETHYLAMINE 1.4 FL NAP
 2,2-DIMETHYL-5-OXO-2,5-DIHYDRO-
 FURAN FL NAP
 DIPENTENE FR WOI
 2-DODECANONE EO HHB
 GAMMA-ELEMENE 16 FR NAP
 EO 2,000-10,000 FL CRC
 EPICATECHIN FR HHB
 EPICUBENOL 13 FR NAP
 EPIGLOBULOL 5 FR NAP
 4,5-EPITHIOCARYOPHYLLENE FR AYL
 1,2-EPI-THIOHUMULENE EO NAP
 8,9-EPI-THIOHUMULENE EO NAP
 5-ALPHA-ERGOSTAN-3-ONE ST NAP
 ESTRADIOL FR NAP
 ESTRONE FR NAP
 ETHYLAMINE 5.2 FL NAP
 ETHYL-HEPTANOATE EO HHB
 ETHYLMETHYLAMINE 3.7 FL NAP
 ALPHA-EUDESMOL 65 FR NAP
 BETA-EUDESMOL 60 FR NAP
 GAMMA-EUDESMOL 18 FR NAP
 EUGENOL EO NAP
 BETA-FARNESENE 35 FR NAP
 FARNESOL 17 FR NAP
 FAT 29,000 FR PED
 FERULIC-ACID FR HHB
 FIBER 72,000 FR PED
 FORMALDEHYDE FR WOI
 FRIEDELIN ST NAP
 FRUCTOSE 15,000-20,000 FR CRC
 GENTISIC-ACID FR HHB
 GERANIC-ACID-METHYL-ESTER EO
 HHB
 GERANIOL FR CRC
 GERANYL-ACETATE EO HHB
 GERANYLISOBUTYRATE EO HHB
 GERANYL-PROPIONATE EO HHB
 GERMACRATRIENE EO CRC

GERMACRENE-B 105 FR NAP
 GERMACRENE-D 15 FR NAP
 GLOBULOL 27 FR NAP
 GLUCOSE 15,000-20,000 FR CRC
 ALPHA-GUAIENE 16 FR NAP
 DELTA-GUAIENE 20 FR NAP
 HEDERAGENIN ST NAP
 HELUPONE PL JSG
 HEPTYLISOBUTYRATE EO HHB
 HEPTYLPROPIONATE EO HHB
 HEXYLISOBUTYRATE
 HEXYLPROPIONATE EO HHB
 HISTIDINE FR HHB
 HULUPINIC-ACID PL JSG
 HULUPONE 21,000-39,000 FR NAP
 HUMULENE 1,200 FR CRC NAP
 ALPHA-HUMULENE FR NAP
 HUMULENE-DIEPOXIDE-A FR NAP
 HUMULENE-EPOXIDE-I 7 FR NAP FR
 HUMULENE-EPOXIDE-II 71 FR NAP
 HUMULENE-MONOEOXIDE-I FR NAP
 HUMULENOL-II 15 FR NAP
 HUMULINONE FR WOI
 HUMULOL PL JSG
 HUMULONE FL CRC
 GAMMA-IONONE EO NAP
 IRON TR FR PED
 ISOADHUMULONE FR HHB
 ISOCOHUMULONE FR HHB
 ISOHUMULONE FR HHB
 ISOLEUCINE FR HHB
 ISOMALTOSE FR HHB
 ISOPARAFFIN FR HHB
 ISOPENTENYL-NARANGENIN 2,375 RE
 NAP
 ISOPENTYLAMINE 0.4 FL NAP
 ISOPREHUMULONE FR HHB
 3'(ISOPRENYL)-2',4'-DIHYDROXY-4,6'-
 DIMETHOXY-CHALCONE 28 FR NAP
 ISOPRENE FR HHB
 ISOQUERCITRIN FR CRC
 ISOXANTHOTHUMOL 1,837 FR CRC NAP
 JUNIPER-CAMPHOR 13 FR NAP
 KAEMPFEROL LF CCO
 KAEMPFEROL-3-RHAMNOSIDE FR
 HHB
 KAEMPFEROL-3-
 RHAMNODIGLUCOSIDE FR HHB
 KAEMPFEROL-3-RUTINOSIDE FR CRC
 KILOCALORIES 2,880 FR PED
 LEDOL 8 FR NAP
 LEUCINE FR HHB
 LEUCOCYANIDIN FL LF CCO
 LEUCODELPHINIDIN FL LF CCO
 LIGNIN ST CRC
 LINALYL-PROPIONATE EO HHB
 GAMMA-LINOLENIC-ACID SD CRC
 LIMONENE FR CRC
 LINALOOL FR CRC
 LINALYL-ISONONYLATE FR WOI
 LUPARENOL FR WOI
 LUPAROL FR WOI
 LUPARONE PL JSG
 LUPULIN FR NAP
 LUPULONE FL CRC
 LYSINE FR HHB
 MAGNESIUM 2,380 FR PED
 MALTOSE FR HHB
 MANGANESE 81 FR PED
 MASLINIC-ACID ST NAP
 METACAMPHORENE EO HHB
 METHYLAMINE 3.7 FL NAP
 3-METHYL-BUTANOIC-ACID FL NAP
 3-METHYL-BUTAN-1-OL FL NAP
 3-METHYL-BUTAN-2-ONE FL NAP
 2-METHYL-BUT-B-EN-2-OL 1,000 FR
 NAP
 3-METHYL-BUT-2-EN-1-AL FL NAP
 2-METHYL-BUT-3-EN-2-OL FR NAP
 2-METHYLBUTYLHEPTANOATE EO
 HHB
 2-METHYLBUTYLHEXANOATE EO
 HHB
 2-METHYLBUTYLISOBUTYRATE EO
 HHB
 3-METHYLBUTYLISOBUTYRATE EO
 HHB
 2-METHYLBUTYLISOVALERATE EO
 HHB
 2-METHYLBUTYL-2-
 METHYLBUTYRATE EO HHB
 2-METHYLBUTYLPROPIONATE EO
 HHB
 METHYL-DECA-4-ENOATE EO HHB
 METHYL-DECA-4,8-DIENOATE EO HHB
 METHYLDECANOATE EO HHB
 METHYLDECENOATE EO HHB
 METHYL-2,5-DIMETHYLHEXENOATE
 EO HHB
 METHYLDODECADIENOATE EO
 HHB
 METHYLDODECANOATE EO HHB
 METHYLDODEC-8-EN-OATE EO HHB
 METHYL-GERANATE EO HHB
 METHYLGLUTAMINE FR HHB
 METHYLGLUTAMIC-ACID FR HHB
 METHYLHEPTANOATE FR HHB
 METHYLHEXANOATE EO HHB

- METHYL-9-METHYLDECANOATE EO HHB
 METHYL-6-METHYL-HEPTANOATE EO HHB
 METHYL-4-METHYLHEX-2-ENOATE EO HHB
 METHYL-5-METHYLHEXANOATE EO HHB
 METHYL-2-METHYLNONANOATE EO HHB
 METHYL-8-METHYLNONANOATE EO HHB
 METHYLNONANOATE EO HHB
 METHYLNONENOATE EO HHB
 METHYLNONYL-KETONE FR CRC
 METHYLOCTANOATE EO HHB
 2-METHYL-5-PENTENYLFURAN EO HHB
 4-(4-METHYL-PENT-3-ENYL)3,6-DIHYDRO-1,2-DITHIINE FR NAP
 4-(4-METHYL-PENT-3-ENYL)1,2-DITHIACYCLOHEX-4-ENE EO NAP
 6-(4-METHYL-PENT-3-ENYL)1,2,3,4-TETRATHIACYCLOCT-6-ENE EO NAP
 3-(4-METHYL-PENT-3-ENYL)-3-THIOPHENE EO NAP
 5-(4-METHYL-5-PENT-3-ENYL)1,2,3-TRITHIACYCLOHEPT-5-ENE EO NAP
 2-METHYL-PROPAN-1-OL FL NAP
 2-METHYLPROPYL-ISOBUTYRATE EO HHB
 2-METHYLPROPYL-2-METHYLBUTYRATE EO HHB
 2-METHYLPROPYLPENTENOATE EO HHB
 2-METHYL-THIA-5-HEX-2-ENE EO NAP
 METHYLTHIOHEPTANOATE EO HHB
 METHYLTHIOHEXANOATE EO HHB
 METHYL-THIO-HUMULONE EO NAP
 METHYLTHIOISOHEPTANOATE EO HHB
 S-METHYLTHIO-2-METHYLBUTANOATE FR AYL
 S-METHYLTHIO-4-METHYLPENTANOATE FR AYL
 METHYLTRIDECENOATE EO HHB
 METHYLUNDECADIENOATE EO HHB
 METHYL-UNDECANOATE EO HHB
 METHYL-UNDECENOATE EO HHB
 ALPHA-MUUROLENE 35 FR NAP
 GAMMA-MUUROLENE 170 FR NAP
 MYRCENE FR CRC
 MYRCENOL FR CRC
 MYRICETIN PL JLS58:118
 NEOCHLOROGENIC-ACID FR HHB
 NEROL FR CRC
 NEROLIDOL FR CRC
 NERYLISOBUTYRATE EO HHB
 NERYLPROPIONATE EO HHB
 NIACIN 435 FR PED
 2-NONANON EO HHB
 NONANYL EO HHB
 OCTYLACETATE EO HHB
 OCTYLISOBUTYRATE EO HHB
 OLEANOLIC-ACID ST NAP
 PALUSTROL 7 FR NAP
 PECTIN 120,000-140,000 FR CRC
 PENTADEC-6,9-DIEN-2-ON EO HHB
 2-PENTADECANONE EO HHB
 PENTOSAN ST CRC
 PENTENYLISOBUTYRATE EO HHB
 PENTYLISOBUTYRATE EO HHB
 PHENYLALANINE FR HHB
 PHENYLETHANOL EO NAP
 PHLOBAPHENE FR WOI
 PHOSPHORUS 4,760 FR PED
 ALPHA-PINENE FR CRC
 BETA-PINENE FR CRC
 PIPERIDINE 2.5 FL NAP
 POSTHUMULONE FR CRC
 POTASSIUM 20,350 FR PED
 PREHUMULONE FR CRC
 PRELUPULONE FR NAP
 PROCYANIDINS FR NAP
 PRODELPHINIDIN-B-3 FR NAP
 PROLINE FR HHB
 PROTEIN 115,000-240,000 FR CRC PED
 PYRROLIDINE 1 FL NAP
 QUERCETIN PL JLS58:118
 QUERCETIN-3-GLUCOSIDE FR HHB
 QUERCETIN-3-RHAMNODIGLUCOSIDE FR HHB
 QUERCETIN-3-RHAMNOSIDE FR HHB
 QUERCETIN-3-RUTINOSIDE FR HHB
 QUERCITRIN FR CRC
 RAFFINOSE FR HHB
 RESINS 110,000-300,000 FR HHB WOI
 RIBOFLAVIN 10 FR PED
 RUTIN FR CRC
 RUTIN 2,000 LF NAP
 SELENIUM 17 FR PED
 SELIN-11-EN-OL 29 FR NAP
 SELINA-3,7-DIENE 195 FR CRC NAP
 SELINA-3,7-(11)-DIENE FR CRC
 SELINA-4(14),7(11)-DIENE FR CRC
 ALPHA-SELINENE FR CRC
 BETA-SELINENE 150 FR CRC NAP
 DELTA-SELINENE 55 FR CRC NAP

BETA-SELINENE-EPOXIDE-I 2 FR NAP
 SERINE FR HHB
 SILICON 45 FR PED
 BETA-SITOSTEROL PL NAP
 SODIUM 47 FR PED
 SPATHULENOL 10 FR NAP
 SQUALENE PL NAP
 STACHYOSE FR HHB
 5-ALPHA-STIGMAST22-EN—3-ONE ST
 NAP
 5-ALPHA-STIGMASTAN-3-ONE ST NAP
 STIGMASTEROL ST NAP
 SUCROSE FR HHB
 TANNINS 20,000-40,000 FR CRC
 ALPHA-TERPINEOL EO NAP
 2-TETRADECANON EO HHB
 TETRADEC-9-EN-2-ON
 THIAMIN 3.4 FR PED
 THREONINE FR HHB
 TIN 22 FR PED
 TRICYCLO-DEHYDRO-HUMULONE
 3,000 FR NAP
 2-TRIDECANONE EO HHB
 TRIMETHYLAMINE FR HHB
 2,3,5-TRITHIAHEXANE EO CCO
 2,3,4-TRITHIAPENTANE FR AYL
 TRYPTOPHAN FR HHB
 TYROSINE FR HHB
 UNDECAN-2-AL EO NAP
 2-UNDECANON EO HHB
 URSOLIC-ACID ST NAP
 VALINE FR HHB
 VIRIDIFLORENE 60 FR NAP
 VIRIDIFLOROL 16 FR NAP
 WATER 60,000-120,000 FR WOI
 XANTHOTHUMOL 15 FR CRC NAP
 ALPHA-YLANGENE 5 FR NAP
 ZINC TR FR PED

HUPERZIA SPP

“CUTLEAF CLUBMOSS”

ACRIFOLINE PL HHB
 ALKALOIDS 1,000-9,000 PL HHB
 ASPARAGINE PL HEG
 DEACETYLFAWCETTINE PL ALK
 FERULIC-ACID PL HHB
 GLUTAMIC-ACID PL HEG
 HUPERZINE-A PL HG17:21
 HUPERZINE-B PL HG17:21
 4-HYDROXY-4-METHYL-GLUTAMIC-
 ACID PL HEG
 LEUCINE PL HEG
 LYCOBERGINE PL JSG

LYCODOLINE PL HHB
 LYCOPODINE PL HHB
 LYCOSERRAMINE PL JSG
 LYCOSERRINE PL JSG
 LYCOTHUINE PL JSG
 NICOTINE PL ALK
 ALPHA-OBSCURINE PL HHB
 BETA-OBSCURINE PL HHB
 16-OXOLYCOCLAVINOL PL JSG
 16-OXOSERRATENETRIOL PL JSG
 PSEUDOSELAGINE PL HHB
 QUERCETIN-GLYCOSIDE? PL HHB
 SELAGINE PL ALK
 SERRATENDIOL PL HEG
 SERRAT-14-ENE-3BETA,21ALPHA-DIOL
 PL JSG
 SERRAT-14-ENE-3BETA,21BETA-DIOL
 PL JSG
 SERRAT-14-ENE-3BETA,21ALPHA,24-
 TRIOL PL JSG
 SERRATIDINE PL JSG
 SERRATINIDINE PL ALK
 SERRATININE PL ALK
 TOHOGENINOL PL JSG
 TOHOGENOL PL JSG
 VANILLIC-ACID PL HHB

HURA CREPITANS L.

“SANDBOX TREE”

BUTYROSPERMOL LX CRC
 P-COUMARIC-ACID LF CRC
 CREPITIN SD CRC
 CYCLOARTENOL LX CRC
 FERULIC-ACID LF CRC
 HURAIN LX CRC
 HURATOXIN LX CRC
 HURINE LX CRC
 INOSITOL LX CRC
 KAEMPFEROL LF CRC
 24-METHYLENOCYCLOARTENOL LX
 CRC

HYACINTHUS ORIENTALIS L.

“HYACINTH”

BENZALDEHYDE 0.16-2.3 FL BML
 BENZOIC-ACID FL GEO
 BENZYL-ACETATE FL GEO
 BENZYL-ALCOHOL 64-920 FL BML
 BENZYL-BENZOATE 10-138 FL BML
 BENZYL-FORMATE 0.08-1.15 FL HHB
 BENZYL-SALICYLATE 0.32-4.6 FL BML
 BENZYL-TIGLATE 0.048-0.69 FL BML

CINNAMALDEHYDE 0.48-6.9 FL BML
 CINNAMYL-ACETATE 1-16 FL BML
 CINNAMYL-ALCOHOL FL HHB
 CIS-CINNAMYL-ALCOHOL 0.32-4.6 FL BML
 TRANS-CINNAMYL-ALCOHOL 18-253 FL BML
 CYANIDIN-3,5-GLUCOSIDE FL HHB
 DELPHINIDIN-3,5-GLUCOSIDE FL HHB
 1,2-DIMETHOXY-BENZENE 0.032-0.460 FL BML
 1,4-DIMETHOXY-BENZENE 0.32-4.6 FL BML
 DIMETHYL-ANTHRANILATE FL GEO
 EO 160-2,300 FL GEO HHB
 ETHYL-BENZOATE 0.032-0.46 FL BML
 ETHYL-SALICYLATE 0.032-0.46 FL BML
 EUGENOL 0.32-4.6 FL BML
 ALPHA-FARNESENE 0.16-2.3 FL BML
 TRANS-ALPHA-FARNESENE 1-14 FL BML
 GERANIOL 0.048-0.69 FL BML
 N-HEPTALDEHYDE(?) FL GEO
 N-HEPTANAL 0.032-0.46 FL BML
 HEPTANAL-DIETHYL-ACETATE 0.016-0.23 FL BML
 HEPTANOL 0.016-0.23 FL BML
 N-HEPTANOL(?) EO GEO
 HEXANOL 0.032-0.46 FL BML
 CIS-3-HEXENOL 0.032-0.46 FL BML
 CIS-3-HEXENYL-ACETATE 0.016-0.23 FL BML
 HYDROQUINONE FL GEO
 HYDROQUINONE-DIMETHYL-ETHER FL GEO
 INDOLE 0.24-3.45 FL BML
 LINALOOL 0.032-0.46 FL BML
 P-METHOXY-ACETOPHENONE 0.16-2.3 FL BML
 2-METHOXYBENZYL-ACETATE 0.032-0.46 FL BML
 2-METHOXYETHYL-ACETATE 0.032-0.46 FL BML
 2-METHOXY-METHYL-BENZOATE 0.16-2.3 FL BML
 P-METHOXY-PHENYL-ETHYL-ACETATE 0.48-6.9 FL BML
 P-METHOXYPHENYLPROPYL-ALCOHOL 0.032-0.46 FL BML
 METHYL-BENZOATE 0.048-0.69 FL BML
 METHYL-BENZYL-ETHER 0.016-0.23 FL BML
 METHYL-CHAVICOL 0.032-0.46 FL BML
 METHYL-EUGENOL 2-34 FL BML

METHYL-O-METHOXY-BENZOATE(?) FL GEO
 METHYL-N-METHYL-ANTHRANILATE 1-7 FL BML
 METHYL-SALICYLATE 0.16-2.3 FL BML
 METHYL-VERATRATE 0.016-0.23 FL BML
 MYRCENE 0.016-0.23 FL BML
 CIS-OCIMENE 0.016-0.23 FL BML
 TRANS-OCIMENE 0.032-0.46 FL BML
 1-OCTEN-3-OL 1-16 FL BML
 PELARGONIDIN-3,5-GLUCOSIDE FL HHB
 PHENYLETHYL-ALCOHOL 6-85 FL BML
 PHENYLEHTYL-BENZOATE 2-28 FL BML
 PHENYLETHYL-SALICYLATE 0.064-0.92 FL HHB
 PHENYLPROPYL-ACETATE 0.08-1.15 FL BML
 PHENYLPROPYL-ALCOHOL 1-18 FL BML
 SAPONIN SD TW HHB
 1,2,4-TRIMETHOXYBENZENE 5-69 FL BML
 TRIMETHOXYMETHYL-BENZOATE 32-460 FL BML
 6,10,14-TRIMETHYL-PENTADECAN-2-ONE 0.16-2.3 FL BML
 UNDECANONE 0.064-0.92 FL BML
 VERATRYL-ACETATE 0.048-0.69 FL BML

HYDNOCARPUS

ANTHELMINTICUS PIERRE

"THAI CHAULMOOGRA"

ARACHNIC-ACID SD 411/
 CHAULMOOGRIC-ACID SD CCO
 DIHYDROCHAULMOOGRIC-ACID SD 411/
 DIHYDROHYDNOCARPIC-ACID SD 411/
 GORLIC-ACID SD CCO
 HYDNOCARPIC-ACID (51%OIL) FR HHB
 ISOGALEIC-ACID SD 411/
 LICHENIN FR HHB
 TARAKTOGENIC-ACID SD 411/

HYDNOCARPUS KURZII (KING)

WARB.

"TRUE CHAULMOOGRA"

ARACHNIC-ACID SD 411/
 ASH 49,300 SD WOI

CHAULMOOGRIC-ACID 67,500-112,500
SD WOI
DIHYDROCHAULMOOGRIC-ACID SD
411/
DIHYDROHYDNOCARPIC-ACID SD 411/
FAT 300,000-550,000 SD WOI
GORLIC-ACID 67,800-113,000 SD WOI
HCN 400 SD WOI
HYDNOCARPIC-ACID 104,700-174,500
SD WOI
ISOGALEIC-ACID SD 411/
OLEIC-ACID 43,800-73,000 SD WOI
PALMITIC-ACID 12,000-20,000 SD WOI
PROTEIN 240,000-242,000 SD HHB WOI
TANNIN SD HHB
TARAKTOGENIC-ACID SD 411/

HYDNOCARPUS WIGHTIANA
BLUME

“HINDI CHAULMOOGRA”

ALEPRESTIC-ACID SD WOI
ALEPRIC-ACID SD WOI
ALEPROLIC-ACID SD WOI
ALEPRYLIC-ACID SD WOI
APIGENIN SD CCO
ARACHNIC-ACID SD 411/
ASH 38,300 SD WOI
CHAULMOOGRIC-ACID 170,775 SD WOI
CHRYSOERIOLOL SD CCO
DIHYDROCHAULMOOGRIC-ACID SD
411/
DIHYDROHYDNOCARPIC-ACID SD 411/
FAT 632,500 SD WOI
GORLIC-ACID 77,165 SD WOI
HYDNOCARPIC-ACID 308,000 SD WOI
HYDNOCARPIN FR HHB
ISOGALEIC-ACID SD 411/
LEUCOPELARGONIDIN FR HHB
LICHENIN FR HHB
LUTEOLIN SD CCO
OLEIC-ACID 41,110 SD WOI
PALMITIC-ACID 11,385 SD WOI
STARCH FR HHB
TARAKTOGENIC-ACID SD 411/
WATER 84,800 SD WOI

HYDRANGEA ARBORESCENS L.

“SMOOTH HYDRANGEA”

ALUMINUM 221 RT PED 1/
ASH 54,000 RT PED
CALCIUM 6,460 RT PED

CHROMIUM 25 RT PED
COBALT 38 RT PED
EO RT HHB
HYDRANGIN RT HHB
IRON 179 RT PED
KAEMPFEROL RT 411/
MAGNESIUM 1,620 RT PED
MANGANESE 187 RT PED
PHOSPHORUS 1,300 RT PED
POTASSIUM 5,810 RT PED
PROTEIN 112,000 RT PED
QUERCETIN RT 411/
RESIN RT HHB
RUTIN RT HHB
SAPONIN RT HHB
SELENIUM 16 RT PED
SILICON 223 RT PED
SODIUM TR RT PED
TIN 11 RT PED
WATER 792,000 RT PED
ZINC TR RT PED

HYDRANGEA PANICULATA SEIB.

“PEEGEE”

FAT 313,000 SD CRC
GALACTOSE BK CRC
GALACTURONIC-ACID BK CRC
D-GLUCOSE BK CRC
HYDRANGIN BK CRC
MUCILAGE BK CRC
NEOHYDRANGIN BK CRC
PROTEIN 250,000 SD CRC
PSEUDOHYDRANGIN RT CRC
RHAMNOSE BK CRC
RUTIN 41,000 FL CRC
UMBELLIFERONE BK CRC

HYDRASTIS CANADENSIS L.

“GOLDENSEAL”

ALUMINUM 325 RT PED
ASCORBIC-ACID 681 RT PED
ASH 66,000 RT PED
BERBERASTINE 20,000-30,000 RH CCO
BERBERINE 5,000-60,000 RT PED
CALCIUM 2,970 RT PED
CANADINE 2,500 RT PED
CANADALINE 450 RT PED
CARBOHYDRATES 823,000 RT PED
BETA-CAROTENE 2.9 RT PED
CHLOROGENIC-ACID
CHROMIUM 9 RT PED

COBALT 153 RT PED
 CORYPALMINE 2 RT PED
 FAT 23,000 RT PED
 FIBER 123,000 RT PED
 D-FRUCTOSE
 D-GALACTOSE ABS
 D-GLUCOSE ABS
 HYDRASTIDINE 91 RT PED
 HYDRASTINE 15,000-40,000 CCO HHB
 HYDRASTININE
 5-HYDROXYTETRAHYDROBERBERINE
 INOSITOL LF RT SH
 IRON 610 RT PED
 KILOCALORIES 2,900 RT PED
 MAGNESIUM 2,940 RT PED
 MANGANESE 85 RT PED
 MECONINE
 NIACIN 62 RT PED
 PHOSPHORUS 1,230 RT PED
 POTASSIUM 6,180 RT PED
 PROTEIN 112,000 RT PED
 RETICULINE
 RIBOFLAVIN 2 RT PED
 SELENIUM 10 RT PED
 SILICON 287 RT PED
 SODIUM TR RT PED
 STARCH 100,000-180,000 RT PED
 THIAMIN 2.6 RT PED
 TIN 9.3 RT PED
 WATER 723,000 RT PED
 XANTHOPUCINE
 ZINC 16 RT PED

HYOSCYAMUS NIGER L.

“HENBANE”

AESCULETIN PL CCO
 ALKALOIDS 300-1,700 LF HHB
 ALKALOIDS 1,600 RT CRC
 ALKALOIDS 600-1,00 SD CRC
 APOATROPINE LF CRC
 ARSENIC 0.29 SD CAL
 ATROPINE LF SD CCO
 ATROSCINE SD CCO
 BIMETHYLAMINE LF HHB
 CALCIUM 7,420 SD CAL
 CHLOROGENIC-ACID LF HHB
 CHOLINE PL CRC
 COPPER 26 SD CAL
 COUMARIN PL CRC
 CUSCOHYGRINE LF CRC
 FAT 250,000-389,000 SD CRC
 GABA LF HHB
 GUM 62,000 SD WOI

HYOSCYAMINE LF SH CCO
 HYOSCYPICRIN LF CRC
 IRON 180 SD CAL
 KAEMPFEROL-3-DIGLYCOSIDE LF
 HHB
 LINOLEIC-ACID 141,000-219,396 SD WOI
 MAGNESIUM 5,250 SD CAL
 MANGANESE 166 SD CAL
 METHYL-PYRROLLIDINE LF HHB
 METHYL-PYRROLINE LF HHB
 MUCILAGE PL CRC
 MYRISTIC-ACID 750-1,167 SD WOI
 OLEIC-ACID 88,000-136,928 SD CCO
 PALMITIC-ACID 16,250-25,285 SD WOI
 PHYTOSTEROLS SD CCO
 POTASSIUM 5,680 SD CAL
 POTASSIUM-NITRATE LF CRC
 PROTEIN 212,000 SD CRC
 PYRIDINE LF HHB
 QUERCETIN-7-GLUCOSIDO-3-
 RHAMNOGALACTOSIDE LF HHB
 RESIN SD WOI
 RUTIN LF HHB
 SCOPETOL LF HHB
 SCOPINE LF CRC
 SCOPOLAMINE SD CCO
 SCOPOLINE LF CRC
 SODIUM 327 SD CAL
 STEARIC-ACID 4,000-6,224 SD WOI
 TETRAMETHYLPUTRESCINE LF CRC
 TRIMETHYLAMINE LF HHB
 TROPINE LF CRC
 ZINC 48 SD CAL

HYPERICUM PERFORATUM L.

“KLAMATH WEED;

COMMON ST. JOHNSWORT”

ASCORBIC-ACID 395 SD WBB
 ASCORBIC-ACID 1,300 PL WOI
 BRENZCATECHIN PL ABS
 (PM 1986:548)
 CADINENE EO WOI
 CADMIUM 1-5 PL (PM 1986)
 CADMIUM 1-7 LF (PM 1986)
 CADMIUM 1-3 RT (PM 1986)
 CAROTENE 165 SD WBB
 CAROTENOIDS PL WOI
 CARYOPHYLLENE EO 411/
 CERYL-ALCOHOL PL WOI
 CHLOROPHYLL PL WOI
 CHOLINE PL HHB
 CINEOLE EO WOI
 N-DECANAL EO 411/

EMODINANTHRANOL PL WBB
 EO 600-3,500 PL HHB WOI
 EO 3,300 SD WBB
 (+)-EPICATECHIN PL 411/
 (-)-EPICATECHIN PL 411/
 FAT 328,000-328,000 SD CRC
 FLAVONOIDS 117,100 FL HHB
 GURJUNENE PL WOI
 HYPERFORIN PL PM1986:531
 HYPERICINS 95-4,660 PL WBB WOI
 HYPERICODIHYDROANTHRONE PL
 WBB
 HYPERIN PL WOI
 HYPEROSIDE PL JSG
 IMANIN PL HHB BACTERISTAT
 ISOHYPERICIN PL HHB
 ISOQUERCITRIN PL HHB
 ISOVALERIC-ACID-ESTER PL HHB
 LEAD 2-12 PL (PM 1986)
 LEAD 6-18 LF (PM 1986)
 LEAD 4-5 RT (PM 1986)
 LIMONENE PL 411/
 LUTEIN FL HHB
 LUTEOXANTHIN FL HHB
 MANNITOL 11,000-20,000 PL HHB
 METHYL-2-OCTANE EO 411/
 MYRCENE EO WOI
 MYRISTIC-ACID PL WOI
 N-NONANE EO 411/
 NOVOIMANIN PL HHB
 N-OCTANOL EO 411/
 PALMITIC-ACID PL WOI
 PECTIN PL HHB
 PHENOL PL PM1986:548
 PHLOBAPHENE PL HHB
 PHLOROGLUCINOL PL PM1986:548
 PHYTOSTEROLS PL WOI
 PINENE EO WOI
 PROTEIN 181,000-207,000 SD CRC
 PROTOHYPERICIN PL HHB
 PROTOPSEUDOHYPERICIN PL WBB
 PROVITAMIN-A 130 PL WOI
 PSEUDOHYPERICIN PL WOI
 PSEUDOHYPERICODIHYDROANTHRONE
 PL WBB
 PYROGALLOL PL PM1986:548
 QUERCETIN PL HHB
 QUERCITRIN PL HHB
 RESORCYNOL PL PM1986:548
 RUTIN PL WOI
 SAPONIN SD WBB
 SITOSTEROL PL HHB
 STEARIC-ACID PL WOI
 TANNINS 51,400-92,700 PL WBB

TANNINS 121,000 SD WBB
 TANNINS 38,000 ST WOI
 TANNINS 162,000 FL WOI
 TANNINS 124,000 LF WOI
 TROLLICHRONE FL HHB
 CIS-TROLLIXANTHIN FL HHB
 VIOLAXANTHIN FL HHB

HYPTIS EMORYI TORR.

“DESERT LAVENDER”

EO 4,000 PL BML

HYPTIS SPICATA (POIT.) BRIQ.

“SPICATE HYPTIS”

CARYOPHYLLENE EO BML

SABINENE EO BML

HYPTIS SUAVEOLENS POIT.

“WILD HOPS”

5ALPHA-ANDROST-2,11-DIONE 390 PL

QJC28:74

5ALPHA-ANDROST-9(11)-EN-12-ONE

270 PL QJC28:74

ALPHA-CADINOL 125 PL QJC28:74

ALPHA-CARYOPHYLLENE 480 PL

QJC28:74

ALPHA-CARYOPHYLLENE-ALCOHOL

85 PL QJC28:74

1,8-CINEOLE 130-4,555 PL QJC28:75

3-CYCLOHEXEN-1-CARBOXALDEHYDE

840 QJC28:74

ALPHA-CYMENE 250 PL QJC28:74

2,6-DIMETHYL-6-(4-

METHYL)BICYCLO{3.1.1}-HEPT-2-ENE

110 PL QJC28:74

2,5-DIMETHYL-3-METHYLENE-1,5-

HEPTADIENE 125 PL QJC28:74

3,7-DIMETHYL-1,6-OCTADIEN-3-OL 180

PL QJC28:74

1,4-DIMETHYL,1,2,3,3A,4,5,6,7-

OCTAHYDROAZULENE 195 PL

QJC28:74

ELEMENE 260 PL QJC28:74

EO 15,000 PL QJC28:75

FAT 143,000-244,000 SD CRC

5BETA,8BETA,H-9BETA,H-10ALPHA-

LAB-14-ENE 435 PL QJC28:75

LIMONENE 390 PL QJC28:75

LINALOOL 80 PL QJC28:74

MENTHOL PL JFM

4-METHYL-1-(1-METHYLETHYL)-3-CYCLOHEXEN-1-OL 260 PL QJC28:74
 ALPHA-PHELLANDRENE 285 PL QJC28:74
 ALPHA-PINENE 215 PL QJC28:74
 PROTEIN 188,000-219,000 SD CRC
 ALPHA-TERPINENE 130 PL QJC28:74
 GAMMA-TERPINENE 175 PL QJC28:74
 ALPHA-TERPINEOL 110 PL QJC28:74
 THUJANE 325 PL QJC28:74
 1,3,3-TRIMETHYLBICYCLO[2.2.1]-HEPTAN-2-OL 80 PL QJC28:74
 1,1,3-TRIMETHYLDECAHYDROCYCLO-PROP AZULENE 140 PL QJC28:74
 4,11,11-TRIMETHYL-8-METHYLENE-BICYCLO[7.2.0]-UNDEC-4-ENE 3,320 PL QJC28:74

HYSSOPUS OFFICINALIS L.

"HYSSOP"

ALLO-AROMADENDRENE 7-100 SH BML
 BENZALDEHYDE TR SH IP35:51
 BENZYL-ALCOHOL 3-32 FL FFJ6:72
 BENZYL-ALCOHOL 0.1-30 LF FFJ6:72
 BICYCLOGERMACRENE 8-10 SH IP35:52
 BORNEOL 3-4 SH IP35:52
 BORNYL-ACETATE PL 411/
 DELTA-CADINENE 14-420 PL BML
 T-CADINOL 0.5-6 LF FFJ6:72
 10-EPI-ALPHA-CADINOL 1 PL BML
 CAFFEIC-ACID PL JLS58:156
 CIS-CALAMENENE
 CAMPHENE 6-80 LF BML JAD FFJ6:69
 CAMPHOR 125-1,240 FL JAD FFJ6:69
 CAMPHOR 10-3,280 LF JAD FFJ6:69
 3-CARENE 1 SH IP35:51
 CARVACROL 1 PL BML IP35:52
 BETA-CARYOPHYLLENE 40-415 FL JAD FFJ6:69
 BETA-CARYOPHYLLENE 3-580 LF BML JAD FFJ6:69
 CHOLINE PL AYL
 1,8-CINEOLE 488-610 SH IP35:51
 CRYPTONE 7-9 SH IP35:52
 CUMINALDEHYDE 4-7 SH IP35:52
 P-CYME NE 6-180 PL BML
 P-CYMENOL-8 1 SH IP35:52
 P-CYMOL 3-4 SH IP35:51
 DIOSMIN (3-6%) PL AYL
 ELEMOL 21-215 FL FFJ6:72
 ELEMOL 0.4-608 LF FFJ6:72

EO 300-20,000 PL AYL BML HHB FFJ6:69
 1,8-EPOXY-2-P-MENTHENE 1 SH IP35:51
 ESTRAGOLE 2-18 FL JAD FFJ6:69
 ESTRAGOLE 1-80 FL JAD FFJ6:69
 EUGENOL 62-624 FL FFJ6:72
 EUGENOL 2-443 LF FFJ6:72 IP35:52
 FERULIC-ACID PL JLS58:156
 FURFURAL 1-2 SH IP35:51
 GERANIOL 0.5-6 FL FFJ6:72
 GERANIOL 0.1-2 LF FFJ6:72
 GERMACRENE-D 10-200 FL JAD FFJ6:69 IP35:52
 GERMACRENE-D 4-740 LF BML JAD FFJ6:69
 GUM
 HEDYCARYOL 10-105 FL JAD FFJ6:69
 HEDYCARYOL 8-1,700 LF JAD FFJ6:69
 HESPERIDIN (5-6%) PL AYL
 HEXAN-1-OL 1-10 FL FFJ6:72
 HEXAN-1-OL 1-15 LF FFJ6:72
 2-HEXANONE 5-6 SH IP35:51
 TRANS-HEXEN-1-OL PL PM55:226
 ALPHA-HUMULENE 1-12 FL JAD FFJ6:69
 ALPHA-HUMULENE 1-140 LF AYL JAD FFJ6:69
 D-2-HYDROXYISOPINOCAMPHONE 6-140 PL AYL IP35:52
 HYSSOPIN PL AYL
 IODINE 0.014
 BETA-IONONE 0.6-6 FL FFJ6:72
 BETA-IONONE 0.3-4 LF FFJ6:72
 ISOPINOCAMPHONE 5-55 FL JAD FFJ6:69
 ISOPINOCAMPHONE 3-6,520 LF BML JAD FFJ6:69
 LIMONENE 5-54 FL FFJ6:69
 LIMONENE 13-240 LF BML JAD FFJ6:69
 LINALOOL 0.1-1 FL FFJ6:72
 LINALOOL 0.2-16 LF FFJ6:72
 MARRUBIN PL 411/
 METHYL-CHAVICOL 1-260 SH BML JAD IP35:52
 METHYL-EUGENOL 7-100
 METHYL-MYRTENATE 5-54 FL JAD FFJ6:69
 METHYL-MYRTENATE 4-480 LF BML JAD FFJ6:69
 MYRCENE 27-400 SH BML IP35:51
 MYRTENAL 24-30 SH IP35:52
 MYRTENIC-ACID-METHYL-ESTER 8-11 SH IP35:52
 MYRTENIC-CIS-PINIC-ACID

MYRTENIC-CIS-PINOIC-ACID
 MYRTENOL 16-160 FL JAD FFJ6:69
 MYRTENOL 0.5-520 LF JAD FFJ6:69
 MYRTENYL-METHYL-ETHER 12-120 FL JAD FFJ6:69
 MYRTENYL-METHYL-ETHER 1-380 LF BML JAD FFJ6:69
 NEROL 0.8-8 FL FFJ6:72
 NEROL 0.8-9 LF FFJ6:72
 CIS-NEROLIDIOL 2-20 LF FFJ6:72
 TRANS-NEROLIDOL TR FL JAD FFJ6:69
 TRANS-NEROLIDOL 1-80 BML JAD FFJ6:69
 NONANOIC-ACID
 NOPINONE 6-8 SH IP35:51
 CIS-BETA-OCIMENE 0.6-6 FL JAD FFJ6:69
 CIS-BETA-OCIMENE 1-720 LF BML JAD FFJ6:69
 TRANS-BETA-OCIMENE 6-66 FL JAD FFJ6:69
 TRANS-BETA-OCIMENE 1-140 LF BML JAD FFJ6:69
 OCTAN-3-OL 1 LF FFJ6:72
 3-OCTANOL PL PM55:226
 3-OCTANONE 1 SH IP35:51
 OCT-1-EN-3-OL 0.1-1 FL FFJ6:72
 OCT-1-EN-3-OL 0.5-48 LF FFJ6:72
 OLEANOLIC-ACID PL 411/
 ALPHA-PHELLANDRENE 12-120 FL FFJ6:69
 ALPHA-PHELLANDRENE 5-320 LF BML JAD FFJ6:69
 BETA-PHELLANDRENE 34-348 FL FFJ6:69
 BETA-PHELLANDRENE 1-800 LF JAD FFJ6:69
 PHENETHYLETHANOL 2-21 FL FFJ6:72
 PHENETHYLETHANOL 0.2-40 LF FFJ6:72
 PHENETHYL-ALCOHOL PL PM55:226
 (1S,2R,5R)-3-PINANONE PL JSG
 ALPHA-PINENE 15-280 LF JAD FFJ6:69
 BETA-PINENE 170-4,580 LF BML JAD FFJ6:69
 CIS-PINIC-ACID
 CIS-PINOIC-ACID
 PINOCAMPHEOL
 PINOCAMPHOME 200-2,060 FL JAD FFJ6:69
 PINOCAMPHOME 24-12,040 LF JAD FFJ6:69 IP35:51
 PINOCARVEOL 32-40 SH IP35:52
 PINOCARVONE 812-1,015 SH IP35:51

RESIN
 ROSMANOL-9-ETHYL-ETHER PL JA068:731
 ROSMARINIC-ACID 5,000 PL FT62:166
 SABINENE 10-100 FL JAD FFJ6:69
 SABINENE 28-380 LF BML JAD FFJ6:69
 TRANS-SABINENE-HYDRATE 1-6 FL JAD FFJ6:69
 TRANS-SABINENE-HYDRATE 1-40 LF JAD FFJ6:69
 SALICYLIC-ACID-METHYL-ESTER 1-2 SH IP35:52
 BETA-SITOSTEROL
 SPATHULENOL TR FL JAD FFJ6:69
 SPATHULENOL 1-440 LF BML JAD FFJ6:69
 TANNIN 50,000-80,000
 ALPHA-TERPINENE 1-411 LF BML JAD FFJ6:69
 GAMMA-TERPINENE 1-60 LF JAD FFJ6:69
 TERPINEN-4-OL 2-28 FL FFJ6:72
 TERPINEN-4-OL 1-790 LF FFJ6:72
 ALPHA-TERPINEOL 0.3-3 FL FFJ6:72
 ALPHA-TERPINEOL 0.1-360 LF BML JAD FFJ6:72
 D-TERPINEOL 12-15 SH IP35:52
 TERPINOLENE 1-20 LF JAD FFJ6:69
 TERPINYL-ACETATE
 ALPHA-THUJONE 24-30 SH IP35:51
 BETA-THUJONE 3-4 SH IP35:51
 THYMOL 2-3 SH IP35:52
 URSOLIC-ACID 4,900
 O-VANILLIN PL PM55:226
 O-VANILLIN 0.1-21 LF FFJ6:72
 P-VANILLIN 1-38 LF FFJ6:72
 VERBENOL 1-78 LF FFJ6:72
 XANTHOPHYLL 3,556

MOISTURE CALCULATED AT 90% FOR
 FFJ6: VALUES

ILEX PARAGUARIENSIS ST. HIL.

"MATE; SOUTH AMERICAN
 HOLLY; PARAGUAY TEA"

BETA-AMYRIN LF CRC
 ASH 13,000 SD CRC
 ASH 42,500 LF CRC
 BUTYRIC-ACID LF HHB
 CAFFEINE 2,000-20,000 LF HHB 411/
 5-O-CAFFELOYLQUINIC-ACID LF HHB
 CHLOROGENIC-ACID LF HHB
 CHLOROPHYLL 19,000 LF CRC

CHOLINE LF HHB
 EO 3,000 LF CRC
 FAT 161,000-173,000 SD CRC
 FIBER 520,000-560,000 SD CRC
 FIBER 176,800 LF CRC
 INOSITOL LF HHB
 ISOBUTYRIC-ACID LF HHB
 ISOCAPRONIC-ACID LF HHB
 ISOVALERIC-ACID LF HHB
 NEOCHLOROGENIC-ACID LF HHB
 NICOTINIC-ACID LF HHB
 NITROGEN 30,000 LF CRC
 4-OXOLAURIC-ACID LF HHB
 PANTOTHENIC-ACID LF HHB
 PROTEIN 64,000-69,000 SD CRC
 PROTEIN 190,000 LF CRC
 PYRIDOXINE LF HHB
 RESIN 48,000 LF CRC
 RESINIC-ACID LF HHB
 RIBOFLAVIN LF HHB
 RUTIN LF CRC
 STEARIC-ACID LF HHB
 TANNIN 40,000-160,000 LF CRC
 THEOBROMINE 960-5,000 LF CRC 411/
 THEOPHYLLINE 0-500 LF CRC 411/
 TRIGONELLINE LF HHB
 URSOLIC-ACID LF CRC
 VANILLIN LF HHB
 2,5-XYLENOL LF HHB
 WATER 72,000 SD CRC
 WATER 55,000 LF CRC

ILLICIAM VERUM HOOK. f.

“STAR-ANISE”

ALLOAROMADENDRENE 1,050 FR
 CIS-ANETHOLE 1-140 FR
 TRANS-ANETHOLE 39,300-45,450 FR
 P-ANISALDEHYDE 190-850 FR
 CIS-ALPHA-BERGAMOTENE 1-50 FR
 TRANS-ALPHA-BERGAMOTENE
 1-160
 BETA-BISABOLENE 1-75 FR
 DELTA-CADINENE 1 FR
 CALAMENE -650 FR
 CAMPHENE 1 FR
 DELTA-3-CARENE 25-465 FR
 CARVONE 1 FR
 CARYOPHYLLENE 85-3,600 FR
 1,4-CINEOLE FR
 1,8-CINEOLE 1-3,500 FR
 4-(BETA-D-GLUCOPYRANOSYLOXY)-
 BENZOIC ACID FR

CINNAMIC-ALCOHOL 1-50 FR
 ALPHA-COPAENE 25-1,100 FR
 BETA-COPAENE 500 FR
 ALPHA-CUBEENE 200 FR
 P-CYMELE 1-100 FR
 P-CYMELE-8-OL 200 FR
 BETA-ELEMENE 1-650 FR
 EO 10,000 LF; 25,000 SD; 100,000 FR;
 ESTRAGOLE FR 411/
 CIS-BETA-FARNESENE 1-40 FR
 TRANS-BETA-FARNESENE 1 FR
 FENICULIN 275-2,550 FR
 ALPHA-HUMULENE 1-900 FR
 KAEMPFEROL-3-0-GLUCOSIDE
 KAEMPFEROL-3-0-GALACTOSIDE
 KAEMPFEROL-3-0-RUTINOSIDE
 LIMONENE 100-5,220 FR
 LINALOOL 250-1,400 FR
 FLAVONOL-GLYCOSIDES 300 FR
 FENCHONE 1 FR
 LONGIFOLENE 1 FR
 P-METHOXY-PROPAN-2-ONE 75-100
 P-METHOXY-PHENYL-PROPAN-2-ONE
 50 FR
 1-METHYL-4-ISOPROPENYL-BENZENE
 1 FR
 METHYL-ANISATE 1-300 FR
 METHYL-CHAVICOL 280-6,500 FR
 TRANS-METHYL-ISOEUGENOL
 0-60 FR
 ALPHA-MUUROLENE 1 FR
 MYRCENE 40-200 FR
 NEROLIDOL 50 FR
 CIS-BETA-OCIMENE 100 FR
 ALPHA-PHELLANDRENE 435 FR
 BETA-PHELLANDRENE 220-835 FR
 ALPHA-PINENE 50-1,310 FR
 BETA-PINENE 1
 QUERCETIN-3-0-GLYCOSIDE
 QUERCETIN-3-0-GALACTOSIDE
 QUERCETIN-3-0-RHAMNOSIDE
 QUERCETIN-3-0-RUTINOSIDE
 QUERCETIN-3-0-XYLOSIDE
 SABINENE 20 FR
 SABINENE 1 FR
 SAFROLE ?
 ALPHA-SANTALENE 1 FR
 BETA-SELININE 1 FR
 ALPHA-TERPINEOL 85-200 FR
 TERPINOLENE 5-435 FR
 TERPINEN-4-OL 1-100 FR
 GAMMA-TERPINENE 1-75 FR
 ALPHA-TERPINENE 70 FR

INDIGOPHERA TINCTORIA L.

"COMMON INDIGO"

ASH 44,000 LF CRC
 CAO53,500 LF CRC
 INDICAN PL CRC
 INDIGOTIN PL CRC
 K2O 16,500 LF CRC
 NITROGEN 51,100 LF CRC
 P2O5 7,800 LF CRC

INULA HELENIUM L.

"ELECAMPANE"

ALANTIC-ACID RT AYL
 ALANTOLACTONE RT GEO
 ALANTOL RT HHB
 ALANTOLIC-ACID RT HHB
 ALANTOPICRIN LF HHB
 ASCORBIC-ACID LF HHB
 AZULENE RT HHB
 4ALPHA-H-CONFERTIN PL JSG
 DAMMARADIENOL RT HHB
 DAMMARADIENYL-ACETATE RT HHB
 1-DEOXY-8-EPIIVANGUSTIN PL JSG
 DIHYDROALANTOLACTONE RT HHB
 DIHYDROISOALANTOLACTONE FR
 HHB
 EO 10,000-40,000 FR AYL GEO
 4-EPIISOINUVISCOLIDE PL JSG
 8-EPIIVANGUSTIN PL JSG
 8-EPITOMENTOSIN PL JSG
 1BETA,10ALPHA-EPOXY-1,10-H-CIS-
 INUNOLIDE PL JSG
 4BETA,5ALPHA-EPOXY-4,5-CIS-
 INUNOLIDE PL JSG
 EUDESMADIEN-5,7(11)-OLID-(8BETA,12)
 RT HHB
 EUDESMADIEN-4-(15),7(11)-OLID-
 (8BETA,12) RT HHB
 FRIEDELIN RT HHB
 GERMACRENE-D RT ABS
 GERMACRENE-D-LACTOSE PL JSG
 HELENALIN RT 411/
 HELENIN RT HHB ANTHELMINTIC
 HELIANTHENIN RT HHB
 1BETA-HYDROXYALANTOLACTONE
 PL JSG
 9BETA-HYDROXYCOSTULONIDE PL
 JSG
 (-)-INOSITOL LF HHB
 INULENIN RT HHB

INULIN 200,000-440,000 RT HHB
 INULINASE RT HHB
 ISOALANTOLACTONE RT GEO
 9-ISOBUTYRYLOXY-COSTULONIDE PL
 JSG
 9-ISOVALERILOXY-COSTULONIDE PL
 JSG
 9BETA-(2-METHYLBUTYRYLOXY)-
 COSTULONIDE PL JSG
 NONACOSAN RT HHB
 2-OXOALANTOLACTONE RT HHB
 PECTINS RT HHB
 PHYTOMELANE RT HHB
 PSEUDOINULIN RT HHB
 RESIN RT HHB
 SCOPOLETIN PL JSG
 BETA-SITOSTEROL RT HHB
 BETA-SITOSTEROL-GLUCOSIDE RT
 HHB
 GAMMA-SITOSTEROL RT HHB
 STIGMASTEROL RT HHB
 SYNANTHRIN RT HHB
 4H-TOMENTOSIN PL JSG
 UMBELLIFERONE PL JSG

IPOMOEA AQUATICA
 FORSSKAL

 "WATER SPINACH;
 SWAMP CABBAGE"

ALANINE 1,090-14,475 LF USA
 ARGININE 1,480-19,655 LF USA
 ASCORBIC-ACID 320-7,300 LF CRC USA
 ASH 13,000-212,500 LF CRC USA
 JAF38:2137
 ASPARTIC-ACID 6,500-86,320 LF USA
 CALCIUM 276-12,665 LF CRC
 USAJAF38:2137
 CARBOHYDRATES 31,400-600,000 LF
 CRC USA
 BETA-CAROTENE 28-500 LF CRC USA
 COPPER 2.6-19 LF JAF38:2137
 CYSTINE 280-3,720 LF USA
 FAT 2,000-156,000 LF USA JAF38:2137
 FIBER 11,000-182,000 LF CRC USA
 GLUTAMIC-ACID 2,520-33,465 LF USA
 GLYCINE 990-13,150 LF USA
 GLYCOLIPIDS 7,921-59,335 JAF38:2137
 HENTRIACONTANE LF WOI
 HISTIDINE 470-6,240 LF USA
 IODINE 0.15-1.5 LF WOI
 IRON 11-540 LF CRC USA JAF38:2137

ISOLEUCINE 1,040-13,810 LF USA
 KILOCALORIES 190-4,400 LF CRC USA
 LEUCINE 1,460-19,390 LF USA
 LYCINE 1,090-14,475 LF USA
 MAGNESIUM 510-3,810 LF JAF38:2137
 METHIONINE 440-5,845 LF USA
 NIACIN 7-120 LF CRC USA
 PECTIN 7,600 PL WOI
 PHENYLALANINE 1,270-16,865 LF USA
 PHOSPHORUS 420-12,360 LF CRC USA
 POTASSIUM 1,500-49,200 LF CRC USA
 PROLINE 880-11,685 LF USA
 PROTEIN 26,000-360,000 LF CRC USA
 JAF38:2137
 RIBOFLAVIN 1-16 LF CRC USA
 SERINE 1,220-16,200 LF USA
 SITOSTEROL LF WOI
 SODIUM 440-15,000 LF CRC USA
 TARAXANTHIN LF WOI
 THREONINE 1,400-18,590 LF USA
 THIAMIN 0.3-9 LF CRC USA
 TOCOPHEROL 118-1,180 LF WOI
 TYROSINE 800-10,625 LF USA
 VALINE 1,350-17,930 LF USA
 WATER 850,000-929,350 LF CRC USA
 WOI JAF38:2137
 ZINC 12.3-92 LF JAF38:2137

IPOMOEA BATATAS (L.) LAM

"SWEET POTATO"

ALANINE 300-3,314 RT USA EFN26:71
 ALUMINUM 8 RT B&H
 ARGININE 520-2,835 RT USA EFN26:71
 ASCORBIC-ACID 210-4,234 LF CRC
 ASCORBIC-ACID 201-1,186 RT CRC USA
 ASH 12,000-259,000 LF CRC
 ASH 7,000-36,064 RT CRC USA
 ASPARTIC-ACID 2,730-10,383 RT USA
 EFN26:71
 BATATIC-ACID RT HHB
 BORON 0.8-20 RT B&H BOB JFS51:523
 CAFFEIC-ACID RT HHB
 CALCIUM 370-17,900 LF B&H CRC
 CALCIUM 203-2,300 RT CRC USA
 CALCIUM-OXALATE 320 RT B&H
 CARBOHYDRATES 80,000-620,000 LF
 CRC
 CARBOHYDRATES 242,800-925,000 RT
 CRC USA
 BETA-CAROTENE 1.8-345 LF B&H CRC
 BETA-CAROTENE 0.1-476 RT B&H CRC
 USA
 ZETA-CAROTENE 0.5-6 RT HHB

CAROTENOIDS 30-350 RT HHB
 CHLORINE 850 RT WOI
 CHLOROGENIC-ACID RT HHB
 TRANS-CINNAMIC-ACID RT HHB
 COPPER 1.5-7 RT B&H USA
 CYANIDIN-3-
 (CAFFEOYLSOPHOROSIDE)-5-
 GLUCOSIDE RT HHB
 CYANIDIN-3-
 DICAFFEOYLSOPHOROSIDE-5-
 GLUCOSIDE PL RAA
 CYSTINE 130-760 RT USA EFN26:71
 FAT 2,000-58,000 LF CRC
 FAT 1,400-14,000 RT B&H CRC USA
 FIBER 12,000-274,000 LF B&H CRC
 FIBER 8,000-32,000 RT B&H CRC USA
 FOLACIN 0.1-0.6 RT USA
 FOLIC-ACID 520 RT B&H
 FURAN-BETA-CARBONIC-ACID RT
 HHB
 GLUTAMIC-ACID 1,590-6,360 RT USA
 EFN26:71
 GLYCINE 580-2,725 RT USA EFN26:71
 HISTIDINE 300-1,200(-35,700) RT USA
 (HHB) EFN26:71
 IODINE 0.045 RT WOI
 IPOMOEAMARONE RT USA
 IPOMOEANINE RT USA
 IRON 10-365 LF B&H CRC
 IRON 4-64 RT B&H CRC USA
 ISOCHLOROGENIC-ACID RT HHB
 ISOLEUCINE 580-3,019 RT USA
 EFN26:71
 ISOQUERCITRIN RT HHB
 KILOCALORIES 420-3,500 LF CRC
 KILOCALORIES 990-3,920 RT CRC USA
 EFN26:71
 LEUCINE 890-4,455 RT USA EFN26:71
 LINOLEIC-ACID 1,110-4,087 RT USA
 ALPHA-LINOLENIC-ACID 200-736 RT
 USA
 LYSINE 810-3,280 RT USA EFN26:71
 MAGNESIUM 620 LF B&H
 MAGNESIUM 95-710 RT USA JFS51:523
 MANGANESE 1-15 RT B&H USA
 METHIONINE 230-1,510 RT USA
 EFN26:71
 MUFA 110-405 RT USA
 NEOCHLOROGENIC-ACID RT HHB
 NIACIN 7-68 LF CRC
 NIACIN 6-26 RT USA
 OLEIC-ACID 110-405 RT USA
 OXALATE 3,700 LF B&H
 OXALIC-ACID 1,000 RT WOI

PAEONIDIN-3-
 (CAFFEYOYLSOPHOROSIDE)-5-
 GLUCOSIDE RT HHB
 PALMITIC-ACID 580-2,135 RT USA
 PANTOTHENIC-ACID 5-24 RT USA
 PECTIN 30,000 RT WOI
 PEONIDIN PL RAA
 PHENYLALANINE 720-3,645 RT USA
 EFN26:71
 PHOSPHORUS 300-6,090 LF CRC
 PHOSPHORUS 261-2,000 RT USA
 PHYTIN 10,500 RT WOI
 PHYTOENE 0.8-9 RT HHB
 PHYTOFLUENE 0.6-7 RT HHB
 PHYTOSTEROLS 120-442 RT USA
 POTASSIUM 5,300-42,256 LF B&H CRC
 POTASSIUM 1,970-15,740 RT CRC USA
 JFS51:523
 PROLINE 710-2,840 RT USA EFN26:71
 PROTEIN 10,300-271,000 LF B&H CRC
 PROTEIN 10,000-65,982 RT USA
 PUFA 1,320-4,860 RT USA
 QUERCETIN RT HHB
 RIBOFLAVIN 2.6-19 LF CRC
 RIBOFLAVIN 0.3-7 RT B&H CRC USA
 SCOPOLIN RT HHB
 SERINE 850-3,400 RT USA EFN26:71
 SFA 640-2,356 RT USA
 SKIMMINE RT HHB
 SODIUM 50-400 LF CRC JFS51:523
 SODIUM 10-1,229 RT B&H CRC USA
 SQUALENE RT HHB
 STARCH 118,000-201,000 RT B&H
 STEARIC-ACID 60-221 RT USA
 SUGAR 23,800-97,000 RT B&H
 SULFUR 130-610 RT B&H WOI
 JFS51:523
 THIAMIN 0.8-9.8 LF CRC
 THIAMIN 0.6-5.1 RT CRC USA
 THREONINE 720-3,019 RT USA
 EFN26:71
 TOCOPHEROL 81 LF WOI
 TOCOPHEROL 40 RT B&H
 TRYPTOPHAN 200-800 RT USA
 EFN26:71
 TYROSINE 460-2,504 RT USA
 EFN26:71
 URONIC-ACID 18,000 RT WOI
 VALINE 830-3,976 RT USA EFN26:71
 VIT-B6 2-10 RT USA
 WATER 830,000-878,000 LF B&H USA
 WATER 682,000-806,000 RT B&H CRC
 USA
 ZINC 2-11 RT B&H USA

EFN26:71 AMINO-ACID VALUES
 MULTIPLIED BY 4 TO CALCULATE
 ZMB VALUES ON SOME AMINO
 ACIDS

IPOMOEA PURGA HAYNE

“JALAP”

CAFFEIC-ACID 30,000-40,000 TU HHB
 CAFFEIC-ACID-METHYL-ESTER TU
 HHB
 CETYL-ALCOHOL TU HHB
 CONVULVULINE TU JFM
 EXEGONIC-ACID TU 411/
 IPURANOL TU HHB
 JALAPINE TU JFM
 JALAPINOLIC-ACID TU HHB
 METHYLETHYLACETIC-ACID TU HHB
 ORIZABINE TU HHB
 QUINOVOSIDES TU 411/
 RESIN 100,000-200,000 TU HHB
 SCAMMONINE TU HHB
 SCOPOLETIN TU HHB
 STARCH TU HHB
 TIGLIC-ACID TU HHB
 VALERIC-ACID TU 411/

INCLUDING I. ORIZABENSIS FROM
 HHB

IPOMOEA VIOLACEA L.

“OLOLIUQU”

“TLITLITZEN”

CHANOCLAVINE 50 SD CRC
 CHANOCLAVINE-1-CARBOXYLIC-ACID
 SD CRC
 ELYMOCLAVINE 50 SD CRC
 ERGINE 350 SD CRC
 ERGOMETRINE 50 SD CRC
 ISOERGINE 50 SD CRC

IRIS X GERMANICA L.

“ORRIS”

ACETALDEHYDE RH GEO
 ACETOPHENONE RH GEO
 ACETOVANILLONE RH GEO
 ACETOVERATRONE RH GEO
 ALPHA-AMYRIN RH 411/
 BETA-AMYRIN RH 411/
 ASCORBIC-ACID 4,200 FL WOI
 ASCORBIC-ACID 870 RT WOI
 ASCORBIC-ACID 4,860 LF WOI

BENZALDEHYDE RH GEO
 BENZOIC-ACID RH GEO
 BENZYL-ALCOHOL RH GEO
 CAPRIC-ACID RH GEO
 CAPRYLIC-ACID RH GEO
 ALPHA-CAROTENE LF WOI
 BETA-CAROTENE LF WOI
 N-DECYLALDEHYDE RH GEO
 DIACETYL RH GEO
 ETHYL-MYRISTATE RH GEO
 EO 1,000-20,000 RH WOI 411/
 EUGENOL RH GEO
 FURFURAL RH GEO
 FURFUROL RH HHB
 GERANIOL RH GEO
 DELTA-GUAJENE RH HHB
 LINALOOL RH GEO
 IONONE RH 411/
 IRIDIN RH WOI
 IRIDGERMANAL PL JSG
 IRIFLOPHENONE RH CCO
 IRIFLORENTIN RH 411/
 IRIFLOSIDE RH 411/
 IRIGENIN RH 411/
 IRILONE RH HHB
 IRILONE-4'-GLUCOSIDE RH HHB
 IRISOLIDONE PL JSG
 IRISOLONE RH HHB
 IRISOLONE-4'-BIOSIDE RH 411/
 IRISTECTOGENIN-B RH 411/
 ALPHA-IRONE RH WOI
 BETA-IRONE RH WOI
 GAMMA-IRONE RH WOI
 LAURIC-ACID RH GEO
 METHYL-ALCOHOL RH GEO
 METHYL-CAPRATE RH GEO
 METHYL-CAPRYLATE RH GEO
 METHYL-LAURATE RH GEO
 METHYL-LINOLEATE RH GEO
 METHYL-MYRISTATE RH GEO
 METHYL-OLEATE RH GEO
 METHYL-PALMITATE RH GEO
 METHYL-PELARGONATE RH GEO
 METHYL-STEARATE RH GEO
 MUCILAGE RH HHB
 MYRISTIC-ACID 850-17,000 RH WOI
 411/
 NAPHTHALENE RH GEO
 2-NONEN-1-AL RH GEO
 NONYLALDEHYDE RH GEO
 OLEIC-ALDEHYDE RH GEO
 PALMITIC-ACID RH GEO
 PELARGONIC-ACID RH GEO
 RESIN RH WOI

BETA-SITOSTEROL RH 411/
 STARCH 200,000-500,000 RH HHB WOI
 SUGAR RH WOI
 TANNIN RH WOI
 TRIDECANOIC-ACID RH HHB
 TRIDECYLIC-ACID RH GEO
 4',5',7-TRIHYDROXY-3',6'-
 DIMETHOXYISOFLAVONE PL JSG
 3',4',5-TRIHYDROXY-6,7-
 DIMETHOXYISOFLAVONE PL JSG
 3',4',5-TRIHYDROXY-6,7-
 METHYLENEDIOXYISOFLAVONE PL
 JSG
 UNDECYLIC-ACID RH GEO

Since many scientists lump *I. germanica* and
I. florentina, I incorporated everything
 under this one.

IRIS VERSICOLOR L.

"BLUE FLAG"

FURFURAL RH 411/
 FURFUROL RH CRC
 GUM RH CRC
 HEPTACOSAN RH CRC
 IPURANOL RH CRC
 IRIDIN RH 411/
 ISOPHTHALIC-ACID RH CRC
 LAURIC-ACID RH CRC
 MYRICYL-ALCOHOL RH CRC
 PALMITIC-ACID RH CRC
 PHYTOSTEROLS RH CRC
 RESIN RH CRC
 SALICYLIC-ACID RH CRC
 STARCH RH CRC
 STEARIC-ACID RH CRC
 TANNIN RH CRC

ISANTHUS BRACHIATUS (L.) BSP

"FALSE PENNYROYAL"

CARYOPHYLLENE 30 PL BML
 CARYOPHYLLENE-OXIDE 1 PL BML
 1,8-CINEOLE 2 PL BML
 EO 1,000 PL BML
 GERMACRENE-D 1 PL BML
 ALPHA-HUMULENE 17 PL BML
 LIMONENE 20 PL BML
 MYRCENE 58 PL BML
 1-OCTEN-3-OL 6 PL BML
 ALPHA-PINENE 684 PL BML
 BETA-PINENE 136 PL BML
 TERPINEN-4-OL 2 PL BML

ALPHA-TERPINEOL 2 PL BML
 ALPHA-TERPINYL-ACETATE 1 PL BML
 TRANS-VERBENOL 4 PL BML

ISATIS TINCTORIA L.

“DYER’S WOAD”

ARSENIC 1,32 RT CAL
 3-BUTENYL-ISOTHIOCYANATE RT
 WOI
 CALCIUM 16,300 RT CAL
 CICEROSE PL HHB
 COPPER 10 RT CAL
 ERUCIC-ACID 26,460-80,640 SD WOI
 FAT 126,000-384,000 SD CRC
 BETA-GALACTAN PL HHB
 GAMMA-GALACTAN PL HHB
 INDICAN RT CCO
 IRON 150 RT CAL
 ISATAN PL HHB
 KAEMPFEROL PL HHB
 LINOLEIC-ACID 23,940-72,960 SD WOI
 LINOLENIC-ACID 30,240-92,160 SD OI
 LUPEOSE PL HHB
 MAGNESIUM 4,410 RT CAL
 MANGANESE 181 RT CAL
 MANNEOTETROSE PL HHB
 MYROSIN RT WOI
 OLEIC-ACID 34,020-103,680 SD WOI
 POTASSIUM 16,300 RT CAL
 PROTEIN 125,000-340,000 SD CRC
 QUERCETIN PL JLS58:125
 SINIGRIN RT CCO
 SODIUM 134 RT CAL
 STACHYOSE PL HHB
 1-SULFO-3-
 INDOLYLMETHYLGLUCOSINOLATE
 PL HHB
 TRYPTANTHRIN LF CCO
 ZINC 40 RT CAL

CAL calls this *Baphiacanthus* (Acanthaceae);
 odds are it is *Isatis*.

JASMINUM OFFICINALE L.

“POET’S JESSAMINE; JASMINE”

ALCOHOLS 371-587 FL WOI
 BENZALDEHYDE FL GEO
 BENZOIC-ACID FL GEO
 BENZYL-ACETATE 1,560-2,470 FL GEO
 BENZYL-ALCOHOL 120-228 FL BML
 GEO
 BENZYL-BENZOATE 108-247 FL GEO

BENZYL-CYANIDE FL BML
 6-CIS-BUTENYLCAPROLACTONE FL
 BML
 CICEROSE ST HHB
 CREOSOL FL GEO
 P-CRESOL FL GEO
 EO 2,400-3,800 FL GEO
 ESTERS 1,795-2,842 FL WOI
 CIS-ETHYL-JASMONATE FL BML
 TRANS-ETHYL-JASMONATE FL BML
 EUGENOL 3-10 FL GEO
 FARNESOL FL GEO
 BETA-GALACTAN ST HHB
 GAMMA-GALACTAN ST HHB
 GERANIOL 240-380 FL BML GEO
 GERANYL-LINALOOL FL BML
 CIS-3-HEXENOL 1-2 FL BML
 CIS-3-HEXENYL-ACETATE 0.48-0.76 FL
 BML
 CIS-3-HEXENYL-BENZOATE FL BML
 CIS-3-HEXENYL-ISOBUTYRATE 0.24-
 0.38 FL BML
 CIS-3-HEXENYL-PROPIONATE 0.72-1.14
 FL BML
 5'-HYDROXY-JASMONIC-ACID-
 LACTONE FL BML
 INDOLE 42-95 FL GEO WOI
 ISOPHYTOL FL BML
 JASMINE-KETOLACTONE FL BML
 JASMININE LF WOI
 CIS-JASMONE 72-114 FL BML
 JASMONE 72-114 FL GEO
 DELTA-JASMONIC-ACID-LACTONE FL
 BML
 D-LINALOOL 360-589 FL GEO
 DL-LINALOOL FL GEO
 CIS-LINALOOL-OXIDE 0.48-0.76 FL
 BML
 LINALYL-ACETATE 186-285 FL GEO
 LUPEOSE ST HHB
 MANNEOTETROSE ST HHB
 METHYL-N-ACETYL-ANTHRANILATE
 FL BML
 METHYL-ANTHRANILATE 11-19 FL
 GEO
 METHYL-BENZOATE 0.72-1.14 FL BML
 METHYL-DEHYDRO-JASMONATE FL
 BML
 METHYL-HEPTENONE 720-1,140 FL
 GEO
 METHYL-JASMONATE 7-38 FL BML
 METHYL-LINOLEATE FL BML
 METHYL-N-METHYL-ANTHRANILATE
 FL BML

METHYL-PALMITATE FL BML
 2-METHYL-QUINOLINE FL BML
 NEROL FL GEO
 NEROLIDOL FL GEO
 CIS-PENT-2-ENYL-PENTANOLIDE FL
 BML
 2-PHENYL-NITROETHANE FL BML
 PHYTOL FL BML
 PHYTYL-ACETATE FL BML
 QUINOLINE FL BML
 RESIN LF WOI
 SALICYLIC-ACID LF WOI
 STACHYOSE ST HHB
 ALPHA-TERPINEOL 120-190 FL BML
 L-ALPHA-TERPINEOL FL GEO
 TETRAMETHYL-HEXADECANOL FL
 BML
 6,10,14-TRIMETHYL-PENTADECAN-2-
 ONE
 VANILLIN FL BML
 2-VINYL-PYRIDINE FL BML

JATEORHIZA PALMATA MIERS

“CALUMBA ROOT”

ALKALOIDS 20,000-43,000 RT WOI 411/
 BISJATRORRHIZINE RT HHB
 CALUMBIN RT 411/
 CHASMANTHIN RT HHB
 COLUMBAMINE RT CCO
 COLUMBIN RT HHB EMETIC WOI
 COLUMBIN-2,3-EPOXIDE RT HHB
 COLUMBINYL-GLUCOSIDE PL JSG
 CRYPTOGENIN RT HHB
 DIOSGENIN RT HHB
 EO 700-15,000 RT HHB
 EX(METHANOL) FUNGISTATIC HHB
 ISOJATEORINYL-GLUCOSIDE PL JSG
 JATEORINE RT HHB
 JATEORINYL-GLUCOSIDE PL JSG
 JATEORRHIZINE RT CCO
 MUCILAGE RT HHB
 PALMARIN RT HHB
 PALMATINE 20,000 RT HHB WOI
 STARCH 300,000-350,000 RT HHB
 TANNIN 0 RT 411/
 THYMOL EO 411/

JATROPHA CURCAS MIERS

“PHYSIC NUT”

“PURGING NUT”

ALPHA-AMYRIN LF CCO
 BETA-AMYRIN BK HHB

ARABINOSE SD MPI
 ARACHIDIC-ACID 1,800-2,880 SD CCO
 ASH 45,000 SD CRC
 CAMPESTEROL LF CRC
 CARBOHYDRATES 335,000 SD CRC
 CURCIN SD HHB
 CURCUSONES PL JSG
 DULCITOL SD HHB
 FAT 300,000-480,000 SD HHB
 FIBER 155,000 SD CRC
 FRUCTOSE SD HHB
 GALACTOSE FR HHB
 GLUCOSE SD HHB
 ISOVITEXIN LF HHB
 7-KETO-BETA-SITOSTEROL SD HHB
 LINOLEIC-ACID 87,960-162,240 SD CCO
 LINOLENIC-ACID 3,300-5,280 SD CCO
 MYRISTIC-ACID 5,400-8,640 SD CCO
 OLEIC-ACID 109,440-199,680 SD CCO
 PALMITIC-ACID 39,900-65,325 SD CCO
 PALMITOLEIC-ACID 4,200-6,720 SD
 CCO
 PROTEIN 162,000-186,000 SD CRC HHB
 RAFFINOSE SD HHB
 RHAMNOSE SD MPI
 BETA-SITOSTEROL SD HHB
 BETA-SITOSTEROL-BETA-D-GLU-
 COSIDE 50,000 SD HHB
 BETA-SITOSTEROL-3-O-BETA-D-
 GLUCOSIDE LF CCO
 STACHYOSE SD HHB
 STARCH SD HHB
 STEARIC-ACID 26,400-87,360 SD CCO
 STIGMAST-5-ENE-3BETA,7ALPHA-DIOL
 LF CRC
 STIGMAST-5-ENE-3BETA,7BETA-DIOL
 LF CRC
 STIGMASTEROL LF CRC
 SUCROSE SD HHB
 TANNIN 116,000-187,000 RE HHB
 TARAXASTEROL BK HHB
 N-1-TRIACONTANOL LF CCO
 VITEXIN LF HHB
 WATER 66,000 SD CRC
 XYLOSE SD MPI

JATROPHA GOSSYPIFOLIA L.

“SPANISH PHYSIC NUT”

APIGENIN LF CRC
 CURCIN SD JFM
 GADAIN PL JSG
 HISTAMINE LF JFM
 ISOPHYTOSTEROL 3,500 BK CRC

ISOVITEXIN LF CRC
 JATROPHINE 4,000 BK CRC JFM
 JATROPHOLONES PL JSG
 JATROPHONE RT JFM
 2-PIPEONYLIDENE-2-VERYTRYL-3-R-
 GAMMA-BUTYROLACTONE SD MPI
 BETA-SITOSTEROL PL MPI
 TANNIN LF JFM
 VITEXIN LF CRC

JUGLANS CINEREA L.

"BUTTERNUT"

ALANINE 13,724-14,194 SD USA
 ALUMINUM 2.6 SD FUR 1/
 ANTIMONY 0.05 SD FUR
 ARGININE 48,620-50,300 SD USA
 ARSENIC 0.02 SD FUR
 ASH 25,150-30,466 SD USA
 ASPARTIC-ACID 30,960-32,030 SD USA
 BARIUM 1.6 SD FUR
 BORON 7 SD FUR
 BROMINE 1.5 SD FUR
 CADMIUM 0.03 SD FUR
 CALCIUM 512-724 SD FUR USA
 CARBOHYDRATES 120,500-124,664 SD
 USA
 CESIUM 0.02 SD FUR
 CHLORINE 78 SD FUR
 CHROMIUM 1.4 SD FUR
 COBALT 0.2 SD FUR
 COPPER 4-8.4 SD FUR USA
 CYSTINE 4,840-5,007 SD USA
 EUROPIUM 0.02 SD FUR
 FAT 564,400-595,044 SD USA
 FIBER 17,370-20,721 SD USA
 FLUORINE 1.1 SD FUR
 GLUTAMIC-ACID 60,840-62,942 SD USA
 GLYCINE 15,080-15,601 SD USA
 GOLD 0.001 SD FUR
 HISTIDINE 8,080-8,359 SD USA
 IODINE 0.1 SD FUR
 IRON 38-76 SD FUR USA
 ISOLEUCINE 11,790-12,197 SD USA
 JUGLANDIC-ACID BK 411/
 JUGLANDIN BK 411/
 JUGLONE BK 411/
 KILOCALORIES 6,120-6,331 SD USA
 LANTHANUM 0.03 SD FUR
 LEAD 0.3 SD FUR
 LEUCINE 21,990-22,750 SD USA
 LINOLEIC-ACID 337,270-348,924 SD USA
 ALPHA-LINOLENIC-ACID 87,180-90,192
 SD USA

LUTETIUM 0.004 SD FUR
 LYSINE 7,700-7,966 SD USA
 MAGNESIUM 2,212-2,676 SD FUR USA
 MANGANESE 31-72 SD FUR USA
 MERCURY 0.01 SD FUR
 METHIONINE 6,111-6,321 SD USA
 MOLYBDENUM 0.4 SD FUR
 MUFA 104,250-107,852 SD USA
 NICKEL 4.3 SD FUR
 OLEIC-ACID 103,520-107,097 SD USA
 PALMITIC-ACID 8,720-9,021 SD USA
 PHENYLALANINE 14,420-14,918 SD USA
 PHOSPHORUS 4,085-4,834 SD USA
 POTASSIUM 4,044-7,493 SD FUR USA
 PROLINE 12,360-12,787 SD USA
 PROTEIN 235,470-271,587 SD USA
 PUFA 427,410-442,179 SD USA
 RUBIDIUM 2.5 SD FUR
 SAMARIUM 0.03 SD FUR
 SCANDIUM 0.003 SD FUR
 SELENIUM 0.1 SD FUR
 SERINE 16,400-16,967 SD USA
 SILICON 1,450 SD FUR
 SODIUM 2.7-12 SD FUR USA
 STEARIC-ACID 4,250-4,397 SD USA
 STRONTIUM 0.3 SD FUR
 SULFUR 2,870 SD FUR
 TANNIN BK 411/
 TANTALUM 0.03 SD FUR
 THORIUM 0.1 SD FUR
 THREONINE 9,400-9,725 SD USA
 TIN 0.7 SD FUR
 TITANIUM 2.7 SD FUR
 TRYPTOPHAN 3,660-3,786 SD USA
 TUNGSTEN 0.08 SD FUR
 TYROSINE 9,770-10,108 SD USA
 VALINE 15,410-15,942 SD USA
 VANADIUM 0.02 SD FUR
 WATER 30,000-36,000 SD USA
 YTTERBIUM 0.04 SD FUR
 ZINC 26-37 SD FUR 1/ USA

JUGLANS NIGRA L.

"BLACK WALNUT"

ALUMINUM 231 FR PED 4/
 ALUMINUM 2.9 SD FUR 5/
 ANTIMONY 0.1 SD FUR
 ARSENIC 0.03 SD FUR
 ASCORBIC-ACID 0 FR PED 4/
 ASH 29,000 FR PED 4/
 ASH 23,000-24,000 SD CRC
 BARIUM 8.7 SD FUR
 BORON 4.7 SD FUR

BROMINE 2.5 SD FUR
 CADMIUM 0.03 SD FUR
 CALCIUM 3,090 FR PED 4/
 CALCIUM 668 SD FUR
 CARBOHYDRATES 821,000 FR PED 4/
 CARBOHYDRATES 148,000-153,000 SD
 CRC
 BETA-CAROTENE 0.6 FR PED 4/
 BETA-CAROTENE 1-2 SD CRC
 CERIUM 0.4 SD FUR
 CESIUM 0.1 SD FUR
 CHLORINE 54 SD FUR
 CHROMIUM 9 FR PED 4/
 CHROMIUM 1.0 SD FUR
 COBALT 36 FR PED
 COBALT 0.3 SD FUR
 COPPER 19 SD FUR
 ELLAGIC-ACID FR HHB
 EUROPIUM 0.01 SD FUR
 FAT 52,000 FR PED
 FAT 593,000-612,000 SD CRC
 FIBER 162,000 FR PED
 FIBER 17,000-18,000 SD CRC
 FLUORINE 1.6 SD FUR
 GOLD 0.001 SD FUR
 HAFNIUM 0.1 SD FUR
 ALPHA-HYDROJUGLONE-4-GLUCOSIDE
 FR HHB
 IODINE 0.1 SD FUR
 IRON 455 FR PED
 IRON 60-73 SD CRC FUR 5/
 JUGLONE PL HHB
 KILOCALORIES 3,630 FR PED 4/
 LANTHANUM 0.03 SD FUR
 LEAD 0.6 SD FUR
 LUTETIUM 0.02 SD FUR
 MAGNESIUM 440 FR PED
 MAGNESIUM 1,794 SD FUR
 MANGANESE 23-24 FR PED
 MANGANESE 30 SD FUR
 MERCURY 0.1 SD FUR
 MOLYBDENUM 0.4 SD FUR
 MYRICETIN FR HHB
 MYRICITRIN FR HHB
 NEOSAKURNIN FR HHB
 NIACIN 7 FR PED
 NIACIN 7 SD CRC
 NICKEL 4.8 SD FUR
 PHOSPHORUS 1,070 FR PED 4/
 PHOSPHORUS 5,700-5,882 SD CRC
 POTASSIUM 14,900 FR PED 4/
 POTASSIUM 4,600-5,154 SD CRC FUR 5/
 PROTEIN 98,000 FR PED
 PROTEIN 205,000-212,000 SD CRC

RIBOFLAVIN 1 FR PED
 RIBOFLAVIN 1 SD CRC
 RUBIDIUM 9.3 SD FUR
 SAKURANETIN FR HHB
 SAKURANIN FR HHB
 SAMARIUM 0.05 SD FUR
 SCANDIUM 0.004 SD FUR
 SELENIUM 30 FR PED
 SELENIUM 0.02 SD FUR
 SILICON 22 FR PED
 SILICON 1,387 SD FUR
 SODIUM 130 FR PED
 SODIUM 3-31 SD CRC FUR
 STRONTIUM 7.1 SD FUR
 SULFUR 2,652 SD FUR
 TANNIN 147,000 FR HHB
 TANTALUM 0.04 SD FUR
 THIAMIN 2 FR PED
 THIAMIN 2 SD CRC
 THORIUM 0.4 SD FUR
 TIN 12 FR PED
 TIN 1.7 SD FUR
 TITANIUM 2.9 SD FUR
 TUNGSTEN 0.1 SD FUR
 URANIUM 0.04 SD FUR
 VANADIUM 0.03 SD FUR
 WATER 876,000 FR PED
 WATER 31,000 SD CRC
 YTTERBIUM 0.1 SD FUR
 ZINC 46 SD FUR 5/
 ZINC TR FR PED 4/

4/PED=Pedersen; FR here=fruit husk.
 5/Fur=Furr et al,1979.

JUGLANS REGIA L.

"ENGLISH WALNUT"

ASCORBIC-ACID 0-52 SD CRC
 ASCORBIC-ACID 8,000-13,000 LF WOI
 ASCORBIC-ACID 4,500-15,000 FR HHB
 ASH 12,000-21,000 SD CRC WOI
 AVICULARIN LF CCO
 BIOTIN 0.02 SD WOI
 3,3'-BISJUGLONE RT BK CCO
 BORON 0.5-12 SD BOB
 CAFFEIC-ACID LF HHB
 CALCIUM 610-1,100 SD CRC
 CARBOHYDRATE 110,000-248,000 SD
 CRC WOI
 CAROTENE 300 LF WOI
 BETA-CAROTENE 0-1 SD CRC
 CHLORINE 230 SD WOI
 CITRIC-ACID FR HHB

COPPER 3 SD WOI
 P-COUMARIC-ACID LF HHB
 CYANIDIN LF HHB
 CYCLO-TRIJUGLONE RT BK CCO
 ELLAGIC-ACID FR HHB
 EO 120-300 LF HHB WOI
 BETA-EUDESOL 12-30 LF 411/
 EUGENOL LF 411/
 FAT 400,000-701,000 SD CRC HHB
 FIBER 14,000-92,000 SD CRC WOI
 FOLIC-ACID 1-2 SD WOI
 GALLIC-ACID FR HHB
 GERANIC-ACID LF 411/
 HEXEN-(2)-AL-(1) LF HHB
 HYDROJUGLONE FR HHB
 HYDROJUGLONEGLUCOSIDE FR HHB
 HYPERIN 2,000 LF HHB
 INOSITOL LF 411/
 IRON 23-24 SD WOI
 JUGLANSIN SD WOI
 JUGLONE LF HHB
 KAEMPFEROL LF HHB
 KAEMPFEROL-3-ARABINOSIDE LF
 HHB
 LECITHIN SD CRC
 LINOLEIC-ACID 228,000-532,760 SD WOI
 LINOLENIC-ACID 8,000-112,160 SD WOI
 MALIC-ACID FR HHB
 MAGNESIUM 1,310 SD WOI
 MESOINOSITOL 3,000 LF HHB
 NIACIN 6-31 SD CRC WOI
 NICOTINE LF HHB
 OLEIC-ACID 36,000-210,300 SD WOI
 PALMITIC-ACID 12,000-49,070 SD WOI
 PANTOTHENIC-ACID 5-10 SD WOI
 PEROXIDASE FR HHB
 PHOSPHORUS 2,800-5,100 SD CRC
 POTASSIUM 4,500-6,870 SD CRC WOI
 PROTEIN 137,000-204,000 SD CRC WOI
 QUERCETIN LF HHB
 QUERCETIN-3-ARABINOSIDE LF HHB
 QUERCITRIN LF HHB
 RIBOFLAVIN 1-5 SD CRC
 SEROTONIN 95 EM ABS1/
 BETA-SITOSTEROL PL JSG
 SODIUM 20-31 SD CRC
 STEARIC-ACID 2,000-21,030 SD WOI
 SULFUR 1,040 SD CRC
 TANNIN 75,100 BK WOI
 TANNIN 122,3000 FR WOI
 TANNIN 90,000-110,000 LF HHB
 THIAMIN 3-5 SD CRC
 1,4,5-TRIOXY-NAPHTHALINE-5-BETA-D-
 GLUCOSIDE FR HHB

TRISJUGLONE PL JSG
 VIT-B6 8-11 SD WOI
 WATER 25,000-42,000 SD CRC

ABS1/=ACT.BOT.CROAT 49:37. 1990

JUNCUS EFFUSUS L.

“RUSH”

AMIDE 16,000 LF WOI
 ARSENIC 0.33 PI CAL
 ASH 36,000 LF WOI
 CALCIUM 1,440 PI CAL
 CARBOHYDRATES 543,000 LF WOI
 CELLULOSE 640,000 LF WOI
 COPPER 5-8 PI CAL
 7,8-DIHYDROXYCOUMARIN PL
 JSG
 EFFUSOL PL CCO
 FAT 24,000 LF WOI
 FAT 50,000 SD WOI
 FIBER 310,000 LF WOI
 GLUCOSE LF WOI
 IRON 840 PI CAL
 JUNCUSOL PL CCO
 LUTEOLIN PL CCO
 LUTEOLIN-GLUCOSIDE PL CCO
 MAGNESIUM 920 PI CAL
 MANGANESE 171 PI CAL
 MERCURY 1.41 PI CAL
 METHYL-PENTOSANS LF WOI
 PENTOSANS LF WOI
 POTASSIUM 7,620 PI CAL
 PROTEIN 86,000 LF WOI
 PROTEIN 131,000 SD WOI
 BETA-SITOSTEROL PL CCO
 BETA-SITOSTERYL-BETA-D-GLU-
 COSIDE RT CCO
 SODIUM 291 PI CAL
 XYLAN PL CCO
 ZINC 38 PI CAL

JUNIPERUS COMMUNIS L.

“JUNIPER; COMMON JUNIPER”

ACETIC-ACID (0.9%) FR HHB
 4-ACETYL-1,4-DIMETHYL-1-
 CYCLOHEXENE PL JSG
 (+)-AFZELICHIN FR 411/
 ALUMINUM 61 FR PED
 AROMADENDRENE 2 FR
 ASCORBIC-ACID 0-350 FR FNF PED
 ASCORBIC-ACID 600 LF
 L-ASCORBIC-ACID FR AYL

- ASH 32,000-64,000 FR HHB PED
 BORNEOL
 BORNYL-ACETATE 2-40 FR
 DELTA-CADINENE FR
 GAMMA-CADINENE 16-164 FR BML
 ALPHA-CADINOL 4 FR
 DELTA-CADINOL 1 FR
 CALAMENENE 71 FR
 CALCIUM 8,490 FR PED
 CAMPHENE 1-100 FR BML HHB
 CAMPHOLENIC-ACETATE FR BML
 CAMPHOLENIC-ALDEHYDE 1-7 FR BML
 CAMPHOR 1-7 FR BML
 CARBOHYDRATES 730,000 FR PED
 DELTA-3-CARENE 2-20 FR BML
 BETA-CAROTENE 12 FR PED
 CARYOPHYLLENE 12-120 FR BML
 CARYOPHYLLENE-OXIDE 15 FR
 (+)-CATECHIN FR 411/
 CEDRENE 12,000-36,000 LF
 CEDROL 200 WD
 CEDROL 450-2,100 LF
 CHROMIUM 32 FR PED
 1,4-CINEOLE 400 FR (?)
 CITRONELLAL 160 FR
 CITRONELLOL LF
 COBALT 123 FR PED
 COMMUNIC-ACID FR 411/
 CIS-COMMUNIC-ACID FR AYL
 TRANS-COMMUNIC-ACID FR AYL
 ALPHA-COPAENE 3-33 FR BML
 ALPHA-CUBEBENE 4-45 FR BML
 CUPARENE 300 WD
 P-CYMENE 48-480 FR HHB
 P-CYMEN-8-OL 1-4 FR BML
 P-CYMOL 240
 14,15-DIHYDROXY-LABDA-8(17),13(16)-
 DIEN-19-ACID HEG
 1,4-DIMETHYL-CYCLOHEX-3-ENYL-
 METHYL-KETONE FR BML
 ALPHA,BETA-DIMETHYLSTEROL 4-40
 FR HHB
 BETA-ELEMENE 10-100 FR BML
 GAMMA-ELEMENE 160 FR
 BETA-ELEMEN-7-ALPHA-OL FR AYL
 EO 2,000-34,200 FR AYL HHB 411/
 (-)-EPIAFZELICHIN FR 411/
 (-)-EPICATECHIN FR 411/
 DL-EPICUBENOL WD
 (+)-EPIGALLOCATECHIN FR 411/
 13,14-EPOXY-IMBRICATOLIC-ACID
 HEG
 8-ETHOXY-P-CYMENE 4-45 FR BML
 4-ETHOXY-P-MENTHEN-1-ENE 8-78 FL
 BML
 CIS-1-ETHOXY-P-MENTH-2-ENE 3-30 FR
 BML
 CIS-3-ETHOXY-P-MENTH-1-ENE 1-3 FR
 BML
 TRANS-3-ETHOXY-P-MENTH-1-ENE 1-
 10 FR BML
 TRANS-4-ETHOXY-PIN-2-ENE 7-66 FR
 BML
 CIS-4-ETHOXY-THUJANE 3-30 FR BML
 TRANS-4-ETHOXYTHUJANE 3-30 FR
 BML
 ETHYL-LAURATE TR FR BML
 ETHYL-MYRISTATE 1-6 FR BML
 ETHYL-PALMITATE 1-10 FR BML
 ETHYL-PALMITOLEATE 1-2 FR BML
 FARNESOL LF
 FAT 56,000 FR PED
 FAT 539,000 SD CRC
 BETA-FENCHENE FR
 FERRUGINOL 10 WD
 FIBER 120,000 FR PED
 FORMIC-ACID (1.9%) FR HHB
 FRUCTOSE FR AYL
 (+)-GALLOCATECHIN FR 411/
 GALLOTANNIN FR AYL
 GERANONE FR BML
 GERANYL-ACETATE FR
 GERMACRENE-D 3-32 FR BML
 GLUCOSE FR AYL
 GLUCURONIC-ACID FR AYL
 GLYCOLIC-ACID FR
 ALPHA-HIMACHALINE
 HUMULENE 102 FR
 ALPHA-HUMULENE 19-192 FR BML
 HUMULENE-OXIDE 9 FR
 5-ALPHA-HYDROXYABIETINIC-ACID
 HEG
 P-HYDROXYBENZOIC-ACID 2,500
 15-HYDROXY-PENTADECANOIC FR
 GEO
 IMBRICATOLIC-ACID HEG
 IRON 150 FR PED
 ISOCUPRESSINIC-ACID HEG
 ISOPIMARIC-ACID FR 411/
 ISOPIMARIC-ACID FR AYL
 JUNENE FR DIURETIC HHB
 (+)-JUNENOL PL JSG
 JUNICEDROL PL JSG
 JUNIONONE FR BML
 JUNIPEROL WD JSG
 KILOCALORIES 3,410 FR PED
 LEUCOANTHOCYANIN FR HHB

L-LIMONENE BK CCO
 LIMONENE 76-910 FR HHB
 LIMONENE-PEROXIDE FR BML
 LINALOOL
 LINALYL-ACETATE
 LONGIFOLENE PL JSG
 MAGNESIUM 930 FR PED
 L-MALEIC-ACID FR GEO
 MANGANESE 63 FR PED
 P-MENTHANE 2-20 FR BML HHB
 P-MENTHA-1,2,4-TRIOL
 MENTHOL 22 FR
 METHYL-CITRONELLOL
 ALPHA-MUUROLENE 54-542 FR BML
 GAMMA-MUUROLENE 128 FR
 MYRCENE 110-1,800 FR BML HHB
 MYRCEOCOMMUNIC-ACID FR AYL
 MYRTENAL FR
 MYRTENAL-ACETATE FR
 MYRTENOL
 NEROL FR
 NEROLIDOL LF
 NERYL-ACETATE 6-60 FR BML
 NIACIN 12 FR PED
 PECTIN 7,000 FR HHB
 PENTOSAN 60,000 FR HHB
 ALPHA-PHELLANDRENE 26-300 FR
 BML HHB
 BETA-PHELLANDRENE 66-660 FR BML
 PHOSPHORUS 900 FR PED
 ALPHA-PINENE 530-9,200 FR BML
 HHB
 BETA-PINENE 22-580 FR BML HHB
 POTASSIUM 9,570 FR PED
 PROTEIN 182,000 FR PED
 RESIN 80,000-100,000 FR AYL HHB
 RIBOFLAVIN 0.6 FR PED
 RUTIN LF
 SABINENE 172-2,700 FR BML HHB
 TRANS-SABINENE-HYDRATE 1-6 FR
 BML
 SANDAROPIMARIC-ACID FR AYL
 SANTENE FR
 SELENIUM 2.4 FR PED
 SELINA-4-(14),7(11)-DIENE 2 FR
 ALPHA-SELINENE 21-210 FR BML
 BETA-SELINENE 32 FR
 SILICON 45 FR PED
 SODIUM TR FR PED
 SUGAR 300,000 FR HHB
 SUGIOL WD
 TANNIN 50,000 FR HHB
 ALPHA-TERPINENE 16-640 FR BML
 HHB

GAMMA-TERPINENE 19-600 FR BML
 HHB
 ALPHA-TERPINEOL 3-40 FR BML
 TERPINEN-4-OL 13-1,050 FR BML
 TERPINOLENE 18-320 FR HHB
 ALPHA-TERPINYL-ACETATE FR
 THIAMIN 1.2 FR PED
 ALPHA-THUJENE 24-240 FR HHB
 THUJOPSENE 3,700 WD
 TIN 63 FR PED
 TORULOSIC-ACID FR AYL
 TRICYCLENONE FR
 UMBELLIFERONE LF
 DELTA-3-VARENE LF
 TRANS-VERBENOL 1-12 FR BML
 WATER 760,000 FR PED
 WIDDROL 100 WD
 YLANGENE FR
 ZINC TR FR PED

JUNIPERUS OXYCEDRUS L.

“SPANISH CEDAR”

“CADE OIL”

L-CADINENE 4,000 WD HHB
 L-CADINOL 6,000 WD HHB
 L-BETA-CARYOPHYLLENE 3,500 WD
 GEO
 CEDRENE 3,000WD GEO
 P-CRESOL 45 WD HHB
 EO 13,000-15,000 FR GEO
 EO 100 LF GEO
 EO 15,000 WD GEO
 GUAIACOL WD GEO
 11BETA-HYDROXYMANOYL-OXIDE PL
 JSG
 METHYL-CIS-COMMUNATE PL JSG
 METHYL-TRANS-COMMUNATE PL JSG
 METHYLIMBRICATALATE PL JSG
 METHYLIMBRICATOLATE PL JSG
 MYRECOMMUNIC-ACID FR HHB
 MYRECOMMUNIC-ACID-METHYL-
 ETHER FR HHB
 PINENE FR GEO
 PSEUDOCEDROL 375-750 WD-GEO
 VIRIDIFLOROL WD HHB
 YLANGENE PL JSG

JUNIPERUS SABINA L.

“SABINE”

(+)-CADINENE PL HHB
 DELTA-CADINOL PL HHB

CAMPHENE PL HHB
 CAPRINALDEHYDE PL HHB
 DELTA-3-CARENE PL HHB
 CARVACROL PL HHB
 CEDROL PL HHB
 1,8-CINEOLE PL HHB
 (+)-CITRONELLOL PL HHB
 P-CYMOL PL HHB
 DIACETYL PL HHB
 (-)-ELEMOL PL HHB
 EO 30,000-50,000 SH HHB
 GALLIC-ACID PL HHB
 GERANIOL PL HHB
 ISOTHUJONE PL HHB
 JUNIPERIC-ACID PL HHB
 D-LIMONENE PL HHB
 MYRCENE PL HHB
 OPLOPENONE PL JSG
 PALUSTRADIENE PL JSG
 PERILLAALCOHOL PL HHB
 ALPHA-PINENE PL HHB
 PINIPICRINE PL HHB
 PODOPHYLLOTOXIN PL HHB
 (+)-SABINENE 6,000-10,000 SH HHB
 SABINIC-ACID PL HHB
 (+)-SABINOL PL HHB
 (+)-SABINYL-ACETATE 12,000-20,000
 SH HHB
 SAVININE PL HHB
 TANNINS PL HHB
 ALPHA-TERPINENE PL HHB
 GAMMA-TERPINENE PL HHB
 (+)-TERPINEOL-(4) PL HHB
 TERPINOLENE PL HHB
 THAPSIC-ACID PL HHB
 ALPHA-THUJENE PL HHB
 THUJONE PL HHB

JUNIPERUS VIRGINIANA L.

“RED CEDAR”

ALUMINUM 57-8,800 SH USG
 ASH 38,000-88,000 SH USG
 BARIUM 4-880 SH USG
 BORON 4-44 SH USG
 CADINENE LF HHB
 CADMIUM 0-1 SH USG
 CALCIUM 7,980-31,680 SH USG
 3-CARENE LF HHB
 ALPHA-CEDRENE 5,250-15,750 WD HHB
 CEDRENE 12,000-36,000 WD HHB
 CEDRENOL WD HHB
 CEDROL 450-6,300 WD HHB

CHROMIUM 0.08-2.64 SH USG
 CITRONELLOL LF HHB
 COBALT 0-1.32 SH USG
 COPPER 0.8-17.6 SH USG
 CUPARENE 300-900 WD HHB
 CYMENE LF HHB
 ELEMICIN LF HHB
 ELEMOL LF HHB
 ELEMOL-ACETATE LF HHB
 EO 2,000 LF HHB
 EO 15,000-45,000 WD HHB
 ESTRAGOLE LF HHB
 ALPHA-EUDES MOL LF HHB
 BETA-EUDES MOL LF HHB
 GAMMA-EUDES MOL LF HHB
 FLUORINE 0-0.264 SH USG
 IODINE 3-10 SH USG
 IRON 11-1,320 SH USG
 LEAD 0.7-132 SH USG
 LIMONENE LF HHB
 LINALOOL LF HHB
 LITHIUM 0.152-0.352 SH USG
 MAGNESIUM 266-8,800 SH USG
 MANGANESE 11-2,640 SH USG
 MERCURY 0-0.025 SH USG
 METHYLEUGENOL LF HHB
 M-METHYL-P-VINYLANISOLE LF HHB
 MOLYBDENUM 0-2.64 SH USG
 MYRCENE LF HHB
 NICKEL 0-17.6 SH USG
 ALPHA-PINENE LF HHB
 PHOSPHORUS 228-3,168 SH USG
 PODOPHYLLOTOXIN LF HHB
 PODOPHYLLOTOXIN-BETA-D-GLU-
 COSIDE PL JSG
 POTASSIUM 1,368-14,080 SH USG
 PSEUDOCEDROL WD HHB
 RHODOXANTHIN LF HHB
 SABINENE LF HHB
 SAFROLE LF HHB
 SELENIUM 0.01-0.04 SH USG
 SILVER 0.044 SH USG
 SODIUM 3.8-422 SH USG
 STRONTIUM 7-440 SH USG
 TANNIN 21,000-86,000 BK HHB
 GAMMA-TERPINENE LF HHB
 4-TERPINENOL LF HHB
 TERPINOLENE LF HHB
 ALPHA-THUJENE LF HHB
 THUJOPSENE 4,500-13,500 WD HHB
 TITANIUM 2.7-128 SH USG
 VANADIUM 0.19-2.64 SH USG
 WIDDROL 300-900 WD HHB

ZINC 7-317 SH USG
ZIRCONIUM 0.8-8.8 SH USG

1/ Assumes ash = 10% SH

JUSSIAEA REPENS L.

“POND DRAGON;
JUSSIAEAE HERBA”

ARSENIC 1.00 PL CAL
CALCIUM 14,400 PL CAL
COPPER 15 PL CAL
IRON 700 PL CAL
MAGNESIUM 3,590 PL CAL
MANGANESE 799 PL CAL
MERCURY 0.31 PL CAL
POTASSIUM 19,200 PL CAL
SODIUM 438 PL CAL
ZINC 40 PL CAL

JUSTICIA ADHATODA L.

“MALABAR NUT”

9-ACETAMIDO-3,4-DIHYDROPYRIDO-
(3,4-B)-INDOLE RT RAA
ADHATODIC-ACID PL 411/
ADHATODINE PL CRC
ADHATONINE RT RAA
ALKALOIDS 4,000
ANISOTINE PL RAA
ANISOTININE PL CRC
ARACHIDIC-ACID 8,000 SD RAA
BEHENIC-ACID 29,000 SD RAA
BETAINE FL RAA
CEROTIC-ACID 12,900 SD RAA
DEOXYVASCINONE RT RAA
2',4-DIHYDROXYCHALCONE-4-
GLUCOSIDE FL RAA
O-ETHYL-ALPHA-D-GALACTOSIDE
FAT 258,000 SD RAA
6-HYDROXYPEGANINE LF RAA
LIGNOCERIC-ACID 27,600 SD RAA
LINOLEIC-ACID 31,700 SD RAA
OLEIC-ACID 128,750 SD RAA
OSCINE PL ALK
PEGANINE PL ALK
BETA-SITOSTEROL SD RAA
BETA-SITOSTEROL-BETA-D-GLU-
COSIDE RT RAA
1,2,3,9-TETRAHYDRO-5-
METHOXPYRROLO-(2,1-B)-
QUINAZOLINE-3-OL PL RAA
VASAKIN PL CRC

VASICINE 7,900 LF RAA
VASICINE 3,400-19,000 PL CRC RAA
VASICINE 4,700 SH RAA
VASICININE PL CRC
VASICINOL RT RAA
VASICINONE PL CRC
VASICOL PL RAA
VASICOLINE PL CRC
VASICOLINONE PL CRC
VISICINOLONE PL RAA

JUSTICIA GENDARUSSA BURM.

“GANDARUSSA”

2-AMINO-BENZYL-ALCOHOL LF MPI
2-(2'-AMINO BENZYLAMINO)-BENZYL-
ALCOHOL LF MPI
2-AMINO-BENZYL-ALCOHOL-O-
METHYL-ETHER LF MPI
2-(2'-AMINO BENZYLAMINO)-BENZYL-
ALCOHOL-O-METHYL-ETHER LF MPI
BETA-SITOSTEROL LF MPI

JUSTICIA PECTORALIS JACQ.

“ANGEL OF DEATH”
“BOLEK HENA”

ASCORBIC-ACID 280-1,867 LF CRC
ASH 23,000-153,000 LF CRC
CALCIUM 6,630-44,200 LF CRC
CARBOHYDRATES 82,000-547,000 LF
CRC
BETA-CAROTENE 27-178 LF CRC
FAT 6,000-40,000 LF CRC
FIBER 28,000-187,000 LF CRC
IRON 74-495 LF CRC
KILOCALORIES 440-2,935 LF CRC
NIACIN 25-165 LF CRC
PHOSPHORUS 350-2,335 LF CRC
PROTEIN 39,000-260,000 LF CRC
RIBOFLAVIN 2013 LF CRC
THIAMIN 0.4-2.7 LF CRC
TRYPTAMINES? PL CRC
WATER 850,000 LF CRC

KAEMPFERIA GALANGA L.

“MARABA”

BORNEOL PL CRC
CAMPHENE PL CRC
CARENE PL CRC
ETHYLCINNAMATE PL CRC

ETHYL-P-METHOXYCINNAMATE PL
CRC
P-METHOXYSTYRENE PL CRC
N-PENTADECANE PL CRC

KALANCHOE DAEGRIMONTIANA
HAMET & PERR.

“DEVIL’S-BACKBONE”

BERSALDEGIN-1-ACETATE PL RAA
BERSALDEGIN-1,3,5-ORTHOACETATE
PL RAA
CLEROSTEROL PL JSG
DAIGREDORIGENIN-3-ACETATE PL
RAA
DAIGREMONTIANIN PL RAA
25(27)-DEHYDROPORIFERASTEROL PL
JSG
FUMARIC-ACID PL RAA
ISOCITRIC-ACID PL RAA
MALIC-ACID PL RAA
QUINIC-ACID PL RAA
OXALIC-ACID PL RAA
SHIKIMIC-ACID PL RAA
SUCCINIC-ACID PL RAA

KALANCHOE PINNATA (LAM.)
PERS.

“AIR PLANT”

“SIEMPRE VIVA”

ALPHA-AMYRIN LF MPI
BETA-AMYRIN LF MPI
BRYOPHYLLIN LF MPI
CAFFEIC-ACID PL JFM
CITRIC-ACID LF WOI
P-COUMARIC-ACID PL JFM
3,8-DIMETHOXY-4',5,7-
TRIHYDROXYFLAVONE LF MPI
FERULIC-ACID PL JFM
FRIEDELIN PL RAA
FUMARIC-ACID LF MPI
GLUTINOL PL RAA
N-HENTRIACONTANE LF MPI
P-HYDROXYBENZOIC-ACID PL JFM
P-HYDROXYCINNAMIC-ACID LF MPI
4-HYDROXY-3-METHOXY-CINNAMIC-
ACID LF MPI
ISOCITRIC-ACID LF WOI
KAEMPFEROL LF MPI
KAEMPFEROL-3-MONOGLUCOSIDE PL
MPI
LACTIC-ACID PL JFM

MALIC-ACID LF WOI
PATULETIN PL RAA
QUERCETIN LF MPI
QUERCETIN-3-DIARABINOSIDE PL JFM
BETA-SITOSTEROL LF MPI
SUCCINIC-ACID PL JFM
SYRINGIC-ACID PL JFM
TARAXEROL PL RAA
N-TRIACONTANE LF MPI

KALANCHOE SPATHULATA DC.

“BEACH BELLS”

AFZELIN LF CCO
CAMPESTEROL FL CCO
FRIEDELIN FL CCO
GLUTINOL FL CCO
KAEMPFEROL LF CCO
PATULETIN LF CCO
QUERCETIN LF CCO
QUERCETIN-3-O-GLUCOSIDE-7-O-
RHAMNOSIDE LF CCO
STIGMASTEROL FL CCO
TARAXEROL FL CCO

KALMIA LATIFOLIA L.

“MOUNTAIN LAUREL”

ANDROMEDOL PL CRC
ANDROMEDOTOXIN PL CRC
ARBUTIN PL CRC
ASEBOTIN LF CRC
ASH 36,000 LF CRC
CALCIUM 9,600 LF CRC
CARBOHYDRATES 782,000 LF CRC
CATECHIN-TANNINS PL CRC
EMULSIN PL CRC
24ALPHA-ETHYLLATHOSTEROL PL
JSG
FAT 95,000 LF CRC
FIBER 147,000 LF CRC
GRAYANOTOXIN LF CRC
INVERTIN PL CRC
IRON 50 LF CRC
KALMITOXINS PL JSG
PECTIN PL CRC
PHLORIDZINE 27,000 LF CRC
PHLORIZINE LF CRC
PHOSPHORUS 1,100 LF CRC
PROTEIN 87,000 LF CRC
BETA-SITOSTEROL PL JSG
SPINASTEROL PL JSG
SUCROSE LF CRC
TANNIC-ACID PL CRC

KRAMERIA SPP.**"RHATANY"**

NEOLIGNANAS EB45:405
 NORNEOLIGNANAS EB45:405
 RATANHAPHENOL-I RT EB45:405
 RATANHAPHENOL-II RT EB45:405
 TANNINS RT EB45:405

KRAMERIA TRIANDRA R. & P.**"RHATANY"**

D-CATECHIN RT HHB
 DL-CATECHIN RT HHB
 EPICATECHIN RT EB45:402
 GAMBIR-CATECHIN RT HHB
 GEOFFROYINE PL JSG
 GUM RT HHB
 N-METHYL-TYROSINE RT EB45:402
 PHLOBAPHENE RT HHB
 PHLOROGLUCIN RT HHB
 PROANTHOCYANIDINS RT EB45:402
 PROCYANIDINS RT EB45:402
 PROPELARGONIDIN RT EB45:402
 PROTOCATECHUIC-ACID RT HHB
 RATANINE PL USDA-1234
 RHATANY-TANNIC-ACID 80,000-180,000
 RT HHB
 RHATANY-TANNIC-ACID 420,000 RT
 BK HHB
 STARCH RT HHB
 SUGAR RT HHB
 TANNIN RT EB45:402
 WAX RT HHB

LABLAB PURPUREUS (L.)**SWEET****"HYACINTH BEAN; LABLAB BEAN;
 BONA VIST BEAN"**

ALANINE 420-11,775 SD USA
 ARGININE 880-19,365 SD USA
 ARSENIC 0.02 SD CAL
 ASCORBIC-ACID 7.7-63.6 FR WOI
 ASCORBIC-ACID 0-1,063 SD USA
 ASH 10,000-56,818 FR WOI
 ASH 6,400-52,762 SD USA
 ASPARTIC-ACID 2,560-31,130 SD
 USA
 CALCIUM 500-2,841 FR WOI
 CALCIUM 500-4,122 SD USA
 CARBOHYDRATES 100,000-568,182 FR
 WOI

CARBOHYDRATES 91,900-757,628 SD
 USA

BETA-CAROTENE 0.66-5.44 SD USA
 COPPER 9-16 SD CAL USA
 CYSTINE 460-3,792 SD USA
 FAT 1,000-5,682 FR WOI
 FAT 2,000-16,488 SD USA
 FIBER 20,000-113,636 FR WOI
 FIBER 13,000-107,172 SD USA
 3-O-GLUCOPYRANOSYL GIBBERELLIN-
 A4 PL JSG

GLUTAMIC-ACID 1,720-42,815 SD USA
 GLYCINE 10,280-11,345 SD USA
 HEMAGGLUTININE-A SD CCO
 HEMAGGLUTININE-B SD CCO
 HISTIDINE 1,090-8,986 SD USA
 IRON 16.7-94.9 FR WOI
 IRON 7.4-61 SD USA
 ISOLEUCINE 2,180-17,972 SD USA
 KILOCALORIES 194-3,795 SD USA
 LAURIC-ACID SD USA
 LEUCINE 1,450-22,355 SD USA
 LINOLEIC-ACID 10-82 SD USA
 ALPHA-LINOLENIC-ACID 70-577 SD
 USA

LYSINE 190-18,000 SD USA
 MAGNESIUM 400-5,505 SD USA
 MANGANESE 39 SD CAL
 METHIONINE 140-2,105 SD USA
 MYRISTIC-ACID 30-247 PL USA
 NIACIN 8-45 FR WOI
 NIACIN 5.2-42.87 SD USA
 OLEIC-ACID 950-7,832 SD USA
 PALMITIC-ACID 560-4,617 SD USA
 PALMITOLEIC-ACID 10-82 SD USA
 PANTOTHENIC-ACID
 PHENYLALANINE 380-13,285 SD USA
 PHOSPHORUS 600-3,409 FR WOI
 PHOSPHORUS 490-4,800 SD USA
 POTASSIUM 2,520-20,775 SD USA
 PROLINE 1,070-12,822 SD USA
 PROTEIN 45,000-255,682 FR WOI
 PROTEIN 21,000-173,125 SD USA
 RIBOFLAVIN 0.92-7.58 SD USA
 SERINE 13,150-14,510 SD USA
 SODIUM 20-260 SD USA
 STEARIC-ACID 90-742 SD USA
 THIAMIN 0.77-12 SD USA
 THREONINE 1,430-11,789 SD USA
 TRYPTOPHAN 880-7,255 SD USA
 TYROSINE 1,550-12,788 SD USA
 TYROSINASE SD CCO
 VALINE 1,430-13,670 SD USA
 WATER 824,000 FR WOI

WATER 878,000 SD USA

ZINC 75-93 SD CAL

LABURNUM ANAGYROIDES

MEDIK.

"GOLDEN CHAIN TREE"

CYTISINE FL SD CRC

METHYLCYTISINE PL JSG

(-)-N-(3-OXOBUTYRL)-CYTISINE PL JSG

LACNANTHES TINCTORIA ELL.

"REDROOT"

N-(1-CARBOXY—2-METHYL-
BUTYRYL)-LACHNANTHOPYRIDONE
PL JSG

ALPHA-CAROTENE FR CRC

CHELIDONIC-ACID FR CRC

3,4-DIHYDROXY-5-PHENYL-
NAPHTHALIC-ALDEHYDE PL JSGDIMETHOXY-PHENYL-NAPHTHALIDES
RT CRC4-HYDROXY-3-METHOXY-5-PHENYL-
1,8-NAPHTHALENE-ANHYDRIDE RT
CRC

LACHNANTHOCARPONE RT CRC

LACHNANTHOFUOREN RT CRC

LACHNANTHOSIDE RT CRC

TETRAMETHOXY-PHENYL-
NAPHTHALIDES RT CRCTRIMETHOXY-PHENYL-NAPHTHALIDES
RT CRC

TRISTEARIN FR CRC

LACTUCA SATIVA L.

"LETTUCE"

ALANINE 560-9,333 LF USA

ALUMINUM 3-126 (-14,500) LF AAS
(USG)

ARGININE 710-11,833 LF USA

ARSENIC 0.0009-0.58 LF USG

ASCORBIC-ACID 180-3,000 LF USA

ASH 7,700-290,000 LF AAS USA USG

ASPARTIC-ACID 1,420-23,667 LF USA

DELTA-5-AVENASTEROL SD HHB

DELTA-7-AVENASTEROL SD HHB

BARIUM 0.126-145 LF USG

BORON 0.9-87 LF USG

BROMINE <1 LF AAS

CADMIUM 0.01-4 LF AAS USG

CAFFEIC-ACID PL JLS58:163

CALCIUM 360-19,140 LF AAS USG

CAMPESTEROL SD HHB

CAOUTCHOUC 400-1,400 LX WOI

CARBOHYDRATES 35,000-583,333 LF
USA

BETA-CAROTENE 11-190 LF USA

CERYL-ALCOHOL LF WOI

CHLORINE 395 LF WOI

CHOLINE LF WOI

CHROMIUM 0.005-20 LF AAS USG

CITRIC-ACID 500 LF WOI

COBALT 0.002-0.87 LF AAS USG

COPPER 0.36-29 LF AAS USG

P-COUMARIC-ACID PL JLS58:163

CYSTINE 160-2,667 LF USA

ERGOSTEROL LF WOI

FAT 3,000-50,000 LF USA

FERULIC-ACID PL JLS58:163

FIBER 7,000-116,667 LF USA

FLUORINE 0.02-8 LF AAS

FOLIC-ACID LF WOI

GALLIUM 0.18-7 ST USG

GLUTAMIC-ACID 1,820-30,333 LF USA

GLYCINE 570-9,500 LF USA

GUM 26,000 LF USA

N-HEXACOSYLALCOHOL LF HHB

HISTIDINE 220-3,667 LF USA

HYOSCYAMINE PL HHB (SHOULD BE
VERIFIED)

IRON 5-176 (-4,350) LF AAS (USG) 1/

ISOLEUCINE 840-14,000 LF USA

KAEMPFEROL PL JLS58:163

LACTUCAXANTHIN PL JSG

ALPHA-LACTUCEROL PL HHB

BETA-LACTUCEROL PL HHB

LACTUCIN PL HHB

LACTUCOPICRIN PL HHB

LANTHANUM 1.26-20.3 LF USG

LEAD 0.02-6 LF AAS USG

LEUCINE 790-13,167 LF USA

LINOLEIC-ACID 470-7,833 LF USA

ALPHA-LINOLENIC-ACID 1,130-18,833
LF USA

LITHIUM 0.07-2.6 LF USG

LUTEOLIN? PL JLS58:163

LYSINE 840-14,000 LF USA

MAGNESIUM 110-8,700 LF AAS USA
USG 1/

MALIC-ACID 600 LF WOI

MANGANESE 1-240 LF AAS USG

MANNITOL PL HHB

MERCURY 0.00018-0.04 LF AAS USG

METHIONINE 160-2,667 LF USA

MOLYBDENUM <0.1-2 LF USG
 MUFA 120-2,000 LF USA
 NIACIN 4-67 LF USA
 NICKEL 0.18-28 LF AAS USG
 NITROGEN 2,200-54,000 LF AAS
 OLEIC-ACID 90-1,500 LF USA
 OXALIC-ACID 110-136 LF WBB WOI
 PALMITIC-ACID 350-5,833 LF USA
 PALMITOLEIC-ACID 30-500 LF USA
 PANTOTHENIC-ACID 2-33 LF USA
 PECTINS 40,000 LF WOI
 PHENYLALANINE 550-9,167 LF USA
 PHOSPHORUS 108-13,920 LF USG 1/
 PHYTOSTEROLS 380-6,333 LF USA
 POTASSIUM 2,900-121,800 LF AAS
 USG 1/
 PROLINE 480-8,000 LF USA
 PROTEIN 13,000-216,667 LF USA
 PUFA 1,590-26,500 LF USA
 QUERCETIN PL JLS58:163
 SELENIUM 0.00009-0.058 LF USG
 SERINE 390-6,500 LF USA
 SFA 390-6,500 LF USA
 SILICON 10-800 LF AAS
 SILVER 0.018-0.58 LF USG
 SITOSTEROL SD HHB
 SODIUM 28-18,560 LF USG
 STEARIC-ACID 40-667 LF USA
 STIGMAST-7-EN-3BETA-OL SD HHB
 STIGMASTEROL SD HHB
 STRONTIUM 2-580 SH USG
 SUGAR 65,000 LF HHB
 SULFUR 29-3,800 SH AAS USG
 TARAXASTEROL PL HHB
 THIAMIN 0.5-8.3 LF USA
 THREONINE 590-9,833 LF USA
 TITANIUM 0.09-870 LF USG 1/
 ALPHA-TOCOPHEROL 6-139 FR TOT
 TRYPTOPHAN 90-1,500 LF USA
 TYROSINE 320-5,333 LF USA
 VALINE 700-11,667 LF USA
 VANADIUM 0.27-20.3 LF USG
 VIT-B6 0.6-9.2 LF USA
 VIT-E LF WOI
 VIT-G LF WOI
 VIT-K LF WOI
 WATER 920,000-971,000 LF USG
 YTTERBIUM 0.036-0.87 LF USG
 YTTRIUM 0.36-8.7 LF USG
 ZINC 2.7-974 LF USG 1/
 ZIRCONIUM 0.36-87 LF USG 1/

1/ USG= U. S. Geol. Survey

LACTUCA SCARIOLA L.

"PRICKLY LETTUCE"

BETA-AMYRIN
 ARACHIDIC-ACID 1,091 SD WOI
 CAOUTCHOUC LX
 CAPROIC-ACID 7392 SD WOI
 CITRIC-ACID LX HHB
 8-DEOXYLACTUCIN PL JSG
 FAT 352,000 SD WOI
 EX LD50:750 IPR MUS
 GERMANICOL
 HYOSCYAMINE LX HHB
 INULIN RT
 BETA-LACTUCEROL LX HHB
 GAMMA-LACTUCEROL LX HHB
 LACTUCIN LX
 LACTUCOPICRIN
 LINOLEIC-ACID 165,616-204,160 SD
 HHB WOI
 MALIC-ACID LX HHB
 MANNITOL LX HHB
 OLEIC-ACID 95,040-130,170 SD HHB
 WOI
 OXALIC-ACID LX (1% LX) HHB
 PALMITIC-ACID 14,080-52,800 LF HHB
 WOI
 RESIN LX HHB
 BETA-SITOSTEROL SD HHB
 SQUALENE SD HHB
 STEARIC-ACID 13,165 SD WOI
 TARAXASTEROL LX HHB
 ALPHA-TOCOPHEROL SD

LACTUCA VIROSA L.

"BITTER LETTUCE"

BETA-AMYRIN PL HHB
 CAOUTCHOUC PL CRC
 CITRIC-ACID PL HHB
 GERMANICOL PL HHB
 HYOSCYAMINE? PL CRC
 LACTUCERIN PL CRC
 LACTUCEROLS PL HHB
 LACTUCIC-ACID PL HHB
 LACTUCIN 2,000 LX HHB
 LACTUPICRIN LX HHB
 MALIC-ACID PL HHB
 MANNITOL PL HHB
 OXALIC-ACID 10,000 LX HHB
 BETA-SITOSTEROL SD CRC
 SQUALENE SD CRC

TARAXASTEROL PL CRC
 TOCOPHEROL SD CRC

LAGENARIA SICERARIA
 (MOLINA) STANDLEY.

“CALABASH GOURD;
 WHITE-FLOWERED GOURD”

ARGININE 140-3,140 FR USA
 ASCORBIC-ACID 101-2,265 FR USA
 ASCORBIC-ACID 50-330 LF WOI
 ASH 4,300-96,400 FR USA
 ASH 44,300 SD WOI
 CALCIUM 200-5,830 FR USA WOI
 CALCIUM-OXIDE 1,100 SD WOI
 CARBOHYDRATES 29,000-760,000 FR
 USA WOI
 CARBOHYDRATES 83,000 SD WOI
 BETA-CAROTENE 0 FR USA
 CHOLINE 640-16,020 FR WOI
 CUCURBITACINS 0-130 FR? WOI
 CUCURBITACIN-B FR WOI
 CUCURBITACIN-D FR WOI
 CUCURBITACIN-G FR WOI
 CUCURBITACIN-H FR WOI
 22-DEOXOCUCURBITACIN-D PL JSG
 FAT 200-4,485 FR USA
 FAT 450,000-525,400 SD WOI
 FIBER 5,600-12,550 FR USA
 FIBER 15,800 SD WOI
 FOLACIN 0.059-1.3 FR USA
 FUFURAL 1,740-43,512 FR WOI
 GIBBERELLIN-A50 PL JSG
 GIBBERELLIN-A52 PL JSG
 BETA-GLYCOSIDASE FR WOI
 HISTIDINE 40-900 FR USA
 IODINE 0.0045-1.12 FR WOI
 IRON 2-45 FR USA
 ISOLEUCINE 330-7,400 FR USA
 KILOCALORIES 140-3,140 FR USA
 LEUCINE 360-8,070 FR USA
 LINOLEIC-ACID 90-2,465 FR HHB USA
 LINOLEIC-ACID 288,000-336,250 SD WOI
 LYSINE 210-4,700 FR USA
 MAGNESIUM 110-2,465 FR USA
 METHIONINE 40-900 FR USA
 NIACIN 3.2-72 FR USA
 OLEIC-ACID 40-1,435 FR HHB USA
 OLEIC-ACID 81,900-95,625 SD WOI
 PALMITIC-ACID 10-225 FR USA
 PECTIN 8,400-210,000 FR WOI
 PHENYLALANINE 150-3,365 FR USA
 PHOSPHORUS 130-2,915 FR USA

PHOSPHORUS-OXIDE 24,600 SD WOI
 PHYTOSTEROLS 1,300 LF WOI
 POTASSIUM 860-33,635 FR USA WOI
 PROTEIN 2,000-139,000 FR USA WOI
 PROTEIN 307,200 SD WOI
 RIBOFLAVIN 0.2-4.9 FR USA
 SAPONIN SD HHB
 SODIUM 20-450 FR USA
 STEARIC-ACID 0 FR USA
 THIAMIN 0.3-6.5 FR USA
 THREONINE 180-4,035 FR USA
 TRYPTOPHAN 30-675 FR USA
 URONIC-ANHYDRIDE 4,900-122,800 FR
 WOI
 VALINE 270-6,055 FR USA
 VIT-B6 0.4-9 FR USA
 WATER 955,400-963,000 FR USA WOI
 WATER 24,700 SD WOI
 ZINC 7-157 FR USA

LAGERSTROEMIA INDICA L.

“CRAPE MYRTLE”

DELPHINIDIN-3-ARABINOSIDE PL HHB
 DIHYDROVERTICILLATINE PL JSG
 ELLAGIC-ACID LF CCO
 FAT 83,000 SD CRC
 GALLIC-ACID FL HHB
 LACERACETAL LF CCO
 LAGERINE PL JSG
 MALVIDIN-3-ARABINOSIDE PL HHB
 METHYL-GALLATE FL HHB
 METHYLLAGERINE PL HHB
 PETUNIDIN-3-ARABINOSIDE PL HHB
 PROTEIN 212,000 SD CRC
 3,3',4-TRI-O-METHYLELLAGIC-ACID RT
 CCO

LAGOCHILUS INEBRIANS
 BUNGE

“INTOXICATING MINT”

CALCIUM-SALTS 20,000-27,000 PL CRC
 EO 300-2,000 PL CRC
 IRON-SALTS 1,300-4,000 PL CRC
 LAGOCHILIN 10,000-30,000 PL CRC
 LAGOCHILIN-3-ACETATE PL JSG
 LAGOCHILIN-TETRAACETATE 10,000-
 30,000 PL CRC
 ORGANIC-ACIDS 7,000-30,000 PL CRC
 RESIN 30,000-90,000 PL CRC
 STACHYDRINE-ACETATE 2,000 PL CRC
 SUGAR 10,000-27,000 PL CRC

TANNIN 20,000-40,000 PL CRC
VIT-K PL CRC

LANTANA CAMARA L.

“LANTANA”
“WILD SAGE”

ALDEHYDES 12-14 LF WOI
AMYLASE LF WOI
ALPHA-AMYRIN PL RAA
ASH 37,000 FR RAA
ASH 102,900 SH WOI
ASH 35,000 ST WOI
CADINENE LF RAA
CADINOL LF RAA
CALCIUM 1,100 FR RAA
CALCIUM 6,100 SH WOI
CAMERENE LF RAA
CARYOPHYLLENE 400-1,600 LF HHB
CATALASE LF WOI
CEDRENE PL JSG
ALPHA-CELLULOSE 306,000 ST WOI
CINEOLE LF HHB
CITRAL LF HHB
P-CYMELE LF RAA
DIPENTENE LF HHB
EO 700 FL WOI
EO 500-3,200 LF HHB RAA
EUGENOL LF HHB
FARNESOL PL JSG
FAT 90,000-480,000 SD CRC WOI
FURFURAL LF HHB
FURFUROIDS 216,000 ST WOI
GERANIOL LF HHB
GLUCOSIDASE LF WOI
ICTEROGENIN LF HHB
INVERTASE LF WOI
ISOCAMARENE LF RAA
3-KETORUSOLIC-ACID PL RAA
LANCAMACRONE PL WOI
LANTABETULIC-ACID PL JSG
LANTADENE-A 3,000-7,000 LF HHB
LANTADENE-B 2,000 LF HHB
LANTADENES 2,000-17,000 LF HHB
LANTANIC-ACID LF HHB
LANTANILIC-ACID PL JSG
LANTANINE 3,000-7,000 LF HHB
LANTANOLIC-ACID LF HHB
LANTIC-ACID PL JSG
LANTOIC-ACID PL RAA
LIGNIN 140,000 ST WOI
LINALOOL LF HHB
LIPASE LF WOI

MAGNESIUM 1,460 FR RAA
MANGANESE 308-412 SH WOI
22-BETA-{(S)-2-METHYLBUTANOYLOXY}-3-
OXOOLEAN-12-EN-28-OIC-ACID PL
JSG
METHYL-3-OXO-URSOLATE LF HHB
CIS-NEROLIDOL PL JSG
TRANS-NEROLIDOL PL JSG
NITROGEN 8,800 SH WOI
OXIDASE LF WOI
PHELLANDRAL LF RAA
PHELLANDRENE 50-240 LF HHB
PHELLANDRONE LF HHB
ALPHA-PINENE LF RAA
PHOSPHORUS 1,500 SH WOI
POTASSIUM 9,000 SH WOI
PROTEIN 51,000 FR RAA
PROTEIN 351,000 SD CRC
BETA-SITOSTEROL SD RAA
SODIUM 8,200 LF RAA
SUGAR 180,000 FR RAA
TANNASE LF WOI
TANNIN LF WOI
GAMMA-TERPINENE LF RAA
TERPINEOL LF HHB
THEVESIDE PL RAA
THEVIRIDOSIDE PL RAA
1-TRIACONTANOL LF RAA
WATER 760,000 FR RAA

LARREA TRIDENTATA (SESSE &
MOC. EX DC) COV.

“CHAPARRAL; CREOSOTE BUSH”

ALUMINUM 290 PL PED 1/
ARGININE 3,100 PL CRC
ASCORBIC-ACID 760 PL PED
ASH 52,000-86,000 PL CRC PED
ASPARTIC-ACID 5,700 PL CRC
BORNEOL PL PED
CALAMENENE PL PED
CALCIUM 7,900-16,400 PL CRC PED
CAMPHENE PL PED
CAMPHOR PL PED
CARBOHYDRATES 387,000-783,000 PL
CRC PED
BETA-CAROTENE 18-138 PL CRC PED
CHLORINE 900 PL CRC
CHROMIUM 8 BK PED
COBALT 93 BK PED
CYSTINE 1,000 PL CRC
3'-DEMETHOXYISOGUAIACTIN PL JSG

2,6-DI-C-GLUCOPYRANOSYLAPIGENIN
PL JSG
6,8-DI-C-
GLUCOPYRANOSYLCHRYSOERIO
L PL JSG
EO 1,000-2,500 PL PED
GAMMA-EUDESOL PL PED
FAT 15,000-46,000 PL CRC PED
FAT 117,000 SD CRC
FIBER 95,000-132,000 PL CRC PED
GLUTAMIC-ACID 13,600 PL CRC
GLYCINE 4,200 PL CRC
GOSSYPETIN PL PED
GOSSYPETIN-3,7-DIMETHYL-ETHER PL
JSG
HERBACETIN PL PED
2-HEPTANONE PL PED
1-HEPTEN-3-ONE PL PED
1-HEXEN-3-ONE PL PED
IRON 210-580 PL CRC PED
ISOLEUCINE 4,700 PL CRC
KILOCALORIES 3,600 BK PED
LEUCINE 7,800 PL CRC
LIMONENE EO PED
MAGNESIUM 500-1,720 PL CRC PED
MANGANESE 52 PL PED
NIACIN 0 PL PED
NORHYDROGUARIARETIC-ACID PL PED
PHENYLALANINE 4,200 PL CRC
PHOSPHORUS 800-1,400 PL CRC PED
ALPHA-PINENE EO PED
BETA-PINENE EO PED
POTASSIUM 5,100-13,700 PL CRC PED
PROTEIN 68,000-150,000 PL CRC PED
PROTEIN 290,000-300,000 SD CRC
RESIN 150,000-200,000 PL PED
RIBOFLAVIN 1.7 PL PED
SELENIUM 19 PL PED
SILICON 31 PL PED
SODIUM 400-410 PL CRC PED
SULFUR 1,600 PL CRC
TERNATIN PL PED
THIAMIN 5.1 PL PED
TIN 14 PL PED
5,8,4'-TRIHYDROXY-3,7,3'-
TRIMETHOXYFLAVONE PL JSG
TRYPTOPHANE 1,000 PL CRC
TYROSINE 3,100 PL CRC
2-UNDECANONE PL PED
VALINE 4,200 PL CRC
WATER 479,000-671,000 PL CRC PED
ZINC TR PL PED

1/PED=Pedersen 1987.

LATUA PUBIFLORA (GRIS.)
PHIL.

“LATUA”

ALKALOIDS 700-1,850 LF CRC
ALKALOIDS 800 SD CRC
ALKALOIDS 2,400-5,000 ST CRC
ATROPINE 490-1,590 LF CRC
ATROPINE 685 SD CRC
ATROPINE 2,085-4,600 ST CRC
SCOPOLAMINE 210-260 LF CRC
SCOPOLAMINE 115 SD CRC
SCOPOLAMINE 315-400 ST CRC

LAURUS NOBILIS L.

“BAY”

ACETIC-ACID LF BML
ACETOEUGENOL 1-42 LF BML
ACETONE LF BML
8-ACETOXYCARVOTANACETONE LF
BML
ALPHA-AMORPHENE LF BML
ALLO-AROMADENDRENE LF BML
ARTEMORIN 5,000 LF JNP43:527.1980
BASSORIN
BENZALDEHYDE LF BML
BICYCLOGERMACRENE LF BML
BICYCLOSQUIPHELLANDRENE
CIS-ALPHA-BISABOLENE
BETA-BISABOLENE LF BML
BORNEOL LF BML
BORNYL-ACETATE
BORON 9-16 LF BOB
ALPHA-BOURBONENE
BUTANAL LF BML
BUTANOL LF BML
BUTYRIC-ACID LF BML
ALPHA-CADINENE LF BML
GAMMA-CADINENE LF BML
DELTA-CADINENE LF BML
CADINA-3,5-DIENE ? LF BML
CADINA-1(6),5-DIENE ? LF BML
CALAMENE LF BML
CAMPHENE 24-186 LF BML
CAMPHOR
CAPROIC-ACID
CAPRYLIC-ACID
DELTA-3-CARENE 15-162 LF BML
TRANS-CARVEOL LF BML
CARVONE LF BML
CARYOPHYLLENE LF BML
CARYOPHYLLENE-OXIDE

- BETA-CARYOPHYLLENE 30-180 LF BML
 1,8-CINEOLE 375-15,000 LF BML 411/
 CINNAMIC-ACID FR
 CINNAMYL-ACETATE LF BML
 ALPHA-COPAENE
 COPPER 4 LF USA
 COSTUNOLIDE 18,000 LF
 JNP43:527.1980
 CUBEENE LF BML
 ALPHA-CUBEENE LF BML
 BETA-CUBEENE LF BML
 CUMINYL-ALCOHOL LF BML
 CYANIDIN PL JLS58:124
 CYCLOSATIVENE LF BML
 P-CYMENE 62-340 LF BML
 DEHYDRO-1,8-CINEOLE LF BML
 DESACETYLLAURENOBIOLIDE 60 LF
 JNP43:527.1980
 BETA-ELEMENE
 GAMMA-ELEMENE
 ELEMICIN
 ENANTHIC-ACID
 EO 10,000-30,000 LF HHB 411/
 EO 10,000-40,000 FR HHB
 1-EPIBICYCLOSQUIPHELLANDRENE
 LF BML
 2-ETHYL-FURAN LF BML
 ETHYL-2-METHYL-PROPIONATE LF
 BML
 ETHYL-PENTANOATE LF BML
 BETA-EUDESMOL LF BML
 EUGENOL 18-1,335 LF BML
 EUGENYL-ACETATE LF BML
 FORMIC-ACID LF BML
 GERANIOL LF FR BML
 GERANYL-ACETATE LF BML
 ALPHA-GUAIENE LF BML
 GUM
 ALPHA-GURJUNENE LF BML
 HEXADECANE LF BML
 HEXANAL LF BML
 HEXANOL LF BML
 CIS-3-HEXANOL LF BML
 TRANS-2-HEXENAL LF BML
 CIS-3-HEXENOL LF BML
 ISOBUTYRIC-ACID LF BML
 KAEMPFEROL PL JLS58:124
 LAURENOLIDE LF 411/
 LAURENOBIOLIDE JNP43:527.1980
 LAURIC-ACID FR
 LEDENE LF BML
 LEUCOCYANIDIN LF BML
 LIMONENE 80-500 LF BML
 LINALOOL 800-3,340 LF BML
 LINOLEIC-ACID
 LINOLENIC-ACID
 MANGANESE 82 LF USA
 CIS-P-MENTH-2-EN-1-OL LF BML
 CIS-P-MENTHA-2,8-DIEN-1-OL LF BML
 METHANOL LF BML
 2-METHYL-BUTANAL LF BML
 3-METHYL-BUTANAL LF BML
 3-METHYL-BUTANOL LF BML
 METHYL-CINNAMATE FR BML
 2-METHYLETHYL-2-
 METHYLPROPIONATE LF BML
 METHYL-EUGENOL 213-2,608 LF BML
 TRANS-METHYL-EUGENOL LF BML
 METHYL-HEPTENONE LF BML
 2-METHYLPROPANOL LF BML
 2-METHYLPROPIONIC-ACID LF BML
 2-METHYLPROPYL-ACETATE LF BML
 2-METHYLPROPYL-2-METHYL-
 PROPIONATE LF BML
 ALPHA-MUUROLENE LF BML
 GAMMA-MUUROLENE LF BML
 MYRCENE 33-320 LF BML
 MYRTENAL LF BML
 MYRTENOL LF BML
 NERAL LF BML
 NEROL LF BML
 NERYL-ACETATE LF BML
 CIS-OCIMENE LF BML
 TRANS-OCIMENE LF BML
 OLEIC-ACID
 PELARGONIC-ACID LF BML
 PENTANAL LF BML
 PENTANOIC-ACID LF BML
 PENTANOL LF BML
 1-PENTEN-3-OL LF BML
 PENTYL-ACETATE LF BML
 PERILLYLALCOHOL LF BML
 PHELLANDRAL LF BML
 ALPHA-PHELLANDRENE 10-120 LF
 BML
 BETA-PHELLANDRENE LF BML
 ALPHA-PINENE 380-2,400 LF BML
 BETA-PINENE 290-2,080 LF BML
 PROPIONIC-ACID LF BML
 QUERCETIN LF BML
 REYNOSIN 2,500 LF JNP43:527.1980
 RUTIN LF BML
 SABINENE 450-2,650 LF BML
 CIS-SABINENE-HYDRATE LF BML
 TRANS-SABINENE-HYDRATE LF BML
 SANTAMARINE 1,500 LF JNP43:527.1980
 ALPHA-SELINENE LF BML

BETA-SELINENE LF BML
 TERPINEN-4-OL 238-1,380 LF BML
 ALPHA-TERPINENE 23-300 LF BML
 GAMMA-TERPINENE 92-137 LF BML
 ALPHA-TERPINEOL 160-1,380 LF BML
 TERPINOLENE 12-200 LF BML
 ALPHA-TERPINYL-ACETATE 656-1,000
 LF BML
 ALPHA-TERPINYL-FORMATE LF BML
 TETRADECANE LF BML
 ALPHA-THUJENE 480-600 LF BML
 THUJ-2-EN-4-OL LF 411/
 TOLUENE LF BML
 TRIDECANE LF BML
 TULIPINOLIDE RT
 VALERIANIC-ACID LF BML
 VERLATORIN 1,400 LF JNP43:527.1980
 VIRIDIFLOROL LF BML
 ALPHA-YLANGENE LF BML

LAVANDULA ANGUSTIFOLIA
MILLER

“ENGLISH LAVENDER”

AMYL-ALCOHOL PL BML
 BERGAMOTENE PL BML
 BORNEOL PL BML
 BORNYL-ACETATE 2,250-6,750 PL
 BML
 4-BUTANOLIDE FL 411/
 BUTYRIC-ACID FL BML
 GAMMA-CADINENE FL BML
 DELTA-CADINENE FL BML
 CAMPHENE PL BML
 CAMPHOR FL BML
 CAPROALDEHYDE FL BML
 CAPROIC-ACID FL BML
 CAPRYLALDEHYDE PL BML
 DELTA-3-CARENE FL BML
 CARYOPHYLLENE FL BML
 CARYOPHYLLENE-OXIDE FL BML
 CEDRENE PL HHB
 1,8-CINEOLE FL BML
 CITRONELLOL FL BML
 COUMARIC-ACID PL HHB
 COUMARIN 1,000-1,500 PL HHB
 CUMINALDEHYDE FL BML
 CURCUMENE PL BML
 DIHYDROCOUMARIN FL 411/
 2,6-DIMETHYL-5-ACETOXYMETHYL-
 HEPTA-1,6-DIEN-3-ONE FL BML
 2,6-DIMETHYL-5-ACETOXYMETHYL-
 HEPT-6-EN-3-ONE FL BML

2,6-DIMETHYL-6-ACETOXY-OCT-7-EN-3-
 ONE FL BML
 2,6-DIMETHYL-6-ACETOXY-OCTA-1,7-
 DIEN-3-ONE FL BML
 EO 3,000-40,000 FL AYL HHB WOI
 FARNESENE FL BML
 GERANIAL FL BML
 GERANIOL FL BML
 GERANYL-BUTYRATE FL BML
 GERANYL-CAPROATE FL BML
 GERANYL-ISOBUTYRATE FL BML
 GERANYL-VALERATE FL BML
 HERNIARIN 20-250 PL HHB
 ISOBUTYRIC-ACID FL BML
 ISOVALERALDEHYDE FL BML
 LAVANDULOL FL WOI
 LAVANDULYL-ACETATE FL BML
 LIMONENE FL BML
 LINALOOL PL HHB
 LINALOOL-OXIDE FL BML
 LINALYL-ACETATE 240-7,200 FL HHB
 WOI
 LINALYL-BUTYRATE FL BML
 LINALYL-CAPROATE FL BML
 LINALYL-ISOBUTYRATE FL BML
 LINALYL-VALERATE FL BML
 LUTEOLIN PL AYL
 2-METHYL-BUT-3-EN-1-OL FL BML
 MYRCENE FL BML
 NERAL FL BML
 ALPHA-NORSANTALENONE FL BML
 OCIMENE FL BML
 1-OCTEN-3-OL FL BML
 1-OCTEN-3-YL-ACETATE FL BML
 5-PENTYL-5-PENTANOLIDE FL 411/
 BETA-PHELLANDRENE FL BML
 ALPHA-PHOTOSANTALOL-A FL BML
 ALPHA-PHOTOSANTALOL-B FL BML
 ALPHA-PINENE PL BML
 BETA-PINENE PL BML
 PLANTEOSE SD HHB
 ROSMARINIC-ACID 12,000 PL FT62:166
 SABINENE FL BML
 ALPHA-SANTALAL FL BML
 ALPHA-SANTALENE FL BML
 BETA-SANTALENE FL BML
 ALPHA-SANTALENIC-ACID FL BML
 TANNIN 120,000 PL HHB
 UMBELLIFERONE PL AYL
 UMBELLIFERONE-METHYL-ETHER
 PL HHB
 URSOLIC-ACID 7,000 LF HHB
 VALERALDEHYDE FL BML
 VALERIC-ACID FL BML

LAVANDULA LATIFOLIA MEDIK.

“ASPIC;

BROAD-LEAVED LAVENDER;
SPIKE LAVENDER”

CIS-ALPHA-BISABOLENE 38-197 PL BML
BML
BETA-BISABOLENE 1-15 PL BML
ALPHA-BISABOLOL 4-10 PL BML
BORNEOL 20-759 PL BML
BORNYL-ACETATE 1-76 PL BML
ALPHA-CADINOL 1-21 PL BML
CAMPHENE 25-231 PL BML
CAMPHOR 480-3,300 PL AYL BML
CIS-CARVEOL 1-5 PL BML
TRANS-CARVEOL 1-3 PL BML
CARVONE 12-5 PL BML
CARYOPHYLLENE 0-191 PL BML
CARYOPHYLLENE-OXIDE 6-24 PL BML
1,8-CINEOLE 1,000-3,434 PL AYL
CITRONELLAL 1-7 PL BML
CITRONELLOL 1-41 PL BML
COUMARIN 0-22 PL BML
CUMINALDEHYDE 3-42 PL BML
P-CYMELE 26-98 PL BML
EO 5,000-11,000 PL AYL BML
TRANS-EPOXY-LINALYL-ACETATE PL BML
BML
EUGENOL 0-9 PL BML
FURFURAL 8-24 PL BML
GERANIOL 3-21 PL BML
GERANYL-ACETATE PL BML
GERANYL-BUTYRATE 6-28 PL BML
HEXANOL 1-7 PL BML
HEXYL-TIGLATE 7-87 PL BML
ALPHA-HUMULENE 0-51 PL BML
ISOBORNEOL 1-43 PL BML
LAVANDULYL-ACETATE 1-33 PL BML
LAVANDULOL 10-165 PL BML
LIMONENE 55-297 PL BML
LINALOOL 1,490-5,104 PL BML
CIS-LINALOOL-EPOXIDE 2-11 PL BML
TRANS-LINALOOL-EPOXIDE 8-21 PL BML
BML
LINALYL-ACETATE 1-198 PL AYL BML
METHYL-HEPTENONE 2-8 PL BML
MYRCENE 39-74 PL BML
NEROL 1-15 PL BML
NERYL-ACETATE 6-28 PL BML
CIS-OCIMENE 0-55 PL BML
TRANS-OCIMENE 0-49 PL BML
3-OCTANOL TR BML
3-OCTANONE 4-13 PL BML

OLEANOLIC-ACID 4,900 LF HHB
ALPHA-PHELLANDRENE 2-13 PL BML
ALPHA-PINENE 90-748 PL BML
BETA-PINENE 60-374 PL BML
ROSMARINIC-ACID 7,000 PL FT62:166
SABINENE 0-55 PL BML
TERPINEN-4-OL 0-121 PL BML
ALPHA-TERPINENE 4-11 PL BML
ALPHA-TERPINEOL 35-209 PL BML
TERPINOLENE 13-28 PL BML
ALPHA-TERPINYL-ACETATE 1-35 PL BML
BML
ALPHA-THUJENE 1-19 PL BML
ALPHA-THUJONE 2-9 PL BML
BETA-THUJONE 4-20 PL BML
URSOLIC-ACID 10,000-19,000 LF HHB

I doubt that taxonomists vouchered the material on which the various lavender chemistries are based. Lavandin= *Lavandula x intermedia*; English lavender=*L. angustifolia* French lavender=*L. stoechas*; Spike lavender=*L. latifolia*

LAVANDULA X INTERMEDIA
EMERIC EX LOIS

“LAVANDIN; DUTCH LAVENDER”

ACETALDEHYDE PL BML
ACETIC-ACID PL BML
ACETONE PL BML
BERGAMOTENE PL BML
CIS-ALPHA-BISABOLENE 60-90 PL BML
BORNEOL 200-330 PL BML
BORNYL-ACETATE 190-342 PL BML
BUTYL-ACETATE PL BML
BUTYRIC-ACID PL BML
BUTYROLACTONE PL BML
ALPHA-CADINENE PL BML
DELTA-CADINENE PL BML
CAMPHENE 26-60 PL BML
ALPHA-CAMPHOLENAL PL BML
CAMPHOR 542-1,620 PL BML
CAPROIC-ACID PL BML
DELTA-3-CARENE 2-8 PL BML
CARVONE PL BML
CARYOPHYLLENE 147-440 PL BML
CARYOPHYLLENE-OXIDE PL BML
1,8-CINEOLE 315-1,110 PL BML
COUMARIN PL BML
CRYPTONE PL BML
CUMINALDEHYDE PL BML
AR-CURCUMENE PL BML
P-CYMELE-8-OL PL BML

- P-CYME NE 32-69 PL BML
 DECANAL PL BML
 DIACETYL PL BML
 DIHYDROCOUMARIN PL BML
 3,4-DIHYDRO-4,7-DIMETHYL-1-(2H)-
 NAPHTHALENONE PL BML
 DIISOPROPYL-KETONE PL BML
 2,6-DIMETHYL-3-
 ACETOXYMETHOXYMETHYL-HEPTA-
 1,4-DIEN-6-OL BML
 2,6-DIMETHYL-3-ACETOXYMETHYL-
 HEPTA-1,6-DIEN-5-ONE PL BML
 2,6-DIMETHYL-3-ACETOXYMETHYL-
 HEPT-1-EN-5-ONE PL BML
 2,6-DIMETHYL-3-ACETOXY-METHYL-
 HEPTA-1,6-DIEN-5-OL PL BML
 2,6-DIMETHYL-6-ACETOXY-OCTA-1,7-
 DIEN-3-ONE PL BML
 2,6-DIMETHYL-6-ACETOXY-OCT-7-EN-3-
 ONE
 4,4-DIMETHYL-2-BUT-4-ENOLIDE PL
 BML
 3,7-DIMETHYL-OCTA-1,7-DIEN-3,6-
 DIOL-6-ACETATE PL BML
 DIMETHYL-SULFIDE PL BML
 EO 10,000-18,000 CNS-DEPRESSANT
 ANTISEPTIC SPASMOLYTIC
 5,7-EPOXY-2,6-DIMETHYL-3-
 ACETOXYMETHYL-HEPTEN-1-ENE
 PL BML
 EPOXY-LINALYL-ACETATE PL BML
 6,7-EPOXY-1-OCTEN-3-OL-3,7-DIM-
 ETHYL-ACETATE PL BML
 EUGENOL PL BML
 TRANS-BETA-FARNESENE PL BML
 FURFURAL PL BML
 GERANIOL 20-36 PL BML
 GERANYL-ACETATE 21-72 PL BML
 GERMACRENE-D 50-90 PL BML
 HEPTANAL PL BML
 TRANS-2-TRANS-4-HEPTADIENAL
 PL BML
 HEPTANE PL BML
 4-HEXAL-4-BUTANOLIDE PL BML
 HEXANAL 30-54 PL BML
 TRANS-2-HEXENAL PL BML
 HEXYL-ACETATE PL BML
 HEXYL-BUTYRATE 35-72 PL BML
 HEXYL-ISOBUTYRATE 13-20 PL BML
 HEXYL-3-METHYL-BUTYRATE 50-90
 PL BML
 HEXYL-2-METHYL-PROPIONATE 25-45
 PL BML
 HEXYL-TIGLATE
 7-HYDROXY-5-ISOPROPENYL-HEPT-2-
 ENAL-2-METHYL-ACETATE PL BML
 6-HYDROXY-OCTA-3,7-DIEN-2-ONE-6-
 METHYL-ACETATE PL BML
 6-HYDROXY-OCTA-2,7-DIENAL-2,6-
 DIMETHYL-ACETATE PL BML
 ISOCARYOPHYLLENE-OXIDE PL BML
 ISOGERANIOL PL BML
 P-ISOPROPYLACETOPHENONE PL BML
 4-ISOPROPYL-4-BUTANOLIDE PL BML
 ISOVALERALDEHYDE PL BML
 LAVANDULOL 30-150 PL BML
 LAVANDULYL-ACETATE 120-195 PL
 BML
 LAVANDULYL-BENZOATE PL BML
 LAVANDULYL-BUTYRATE PL BML
 LAVANDULYL-CAPROLATE PL BML
 LAVANDULYL-2-METHYL-BUTYRATE
 PL BML
 LAVANDULYL-2-METHYL-PROPI-
 ONATE 60-108 PL BML
 LIMONENE 50-140 PL BML
 LINALOOL 3,098-3,710 PL BML
 CIS-LINALOOL-OXIDE 8-98 PL BML
 TRANS-LINALOOL-OXIDE 21-28 PL
 BML
 LINALYL-ACETATE 2,170-3,950 PL BML
 LINALYL-BUTYRATE PL BML
 LINALYL-FORMATE PL BML
 P-MENTHA-1,4-DIEN-7-AL PL BML
 3-METHYL-BUT-3-EN-2-OL PL BML
 2-METHYL-BUTANAL PL BML
 3-METHYL-BUTANAL PL BML
 3-METHYL-BUTANOL PL BML
 2-METHYL-4-BUTANOLIDE PL BML
 2-METHYL-FURAN PL BML
 6-METHYL-3,5-HEPTADIEN-2-ONE PL
 BML
 6-METHYL-3-HEPTANONE PL BML
 6-METHYL-5-HEPTEN-2-ONE PL BML
 2-METHYL-PROPANAL PL BML
 METHYLPROPYL-KETONE PL BML
 4-METHYL-4-VINYL-4-BUTANOLIDE PL
 BML
 4-METHYL-4-VINYL-2-BUT-4-ENOLIDE
 PL BML
 MYRCENE 47-65 PL BML
 NEROL PL BML
 NERYL-ACETATE PL BML
 NOPINONE PL BML
 ALPHA-NORSANTALENONE PL BML
 CIS-OCIMENE 100-230 PL BML
 TRANS-OCIMENE 30-460 PL BML
 CIS-ALLO-OCIMENE PL BML

TRANS-ALLO-OCIMENE PL BML
 OCT-7-EN-3-ONE-6-OL-6-METHYL-
 ACETATE PL BML
 OCTA-1,7-DIEN-3,6-DIOL-2,6-DIM-
 ETHYL-6-ACETATE PL BML
 OCTA-3,7-DIEN-2,6-DIOL-2,6-DIM-
 ETHYL-6-ACETATE PL BML
 OCTA-1,7-DIEN-3-ONE-6-OL-6-METHYL-
 ACETATE PL BML
 OCTANAL PL BML
 3-OCTANOL 25-45 PL BML
 3-OCTANONE 30-199 PL BML
 1-OCTEN-3-OL 10-50 PL BML
 1-OCTEN-3-YL-ACETATE 45-81 PL BML
 L-OCTEN-3-ACETYL-ACETATE PL BML
 1-OCTEN-3-YL-BUTYRATE PL BML
 5-PENTYL-5-PENTANOLIDE PL BML
 PERILLYL-ALCOHOL PL BML
 PERILLYL-ALDEHYDE PL BML
 PHELLANDRENE PL BML
 ALPHA-PHOTOSANTALOL PL BML
 ALPHA-PINENE 28-120 PL BML
 BETA-PINENE 15-70 PL BML
 ROSMARINIC-ACID 5,000 PL FT62:166
 SABINAKETONE PL BML
 SABINENE 6-20 PL BML
 ALPHA-SANTALAL PL BML
 ALPHA-SANTALENE PL BML
 BETA-SANTALENE PL BML
 ALPHA-SANTALENIC-ACID PL BML
 TERPINEN-4-OL 46-279 PL BML
 ALPHA-TERPINENE PL BML
 GAMMA-TERPINENE 2-15 PL BML
 ALPHA-TERPINEOL 0-100 PL BML
 TERPINEOLENE 12-26 PL BML
 ALPHA-TERPINYL-ACETATE PL BML
 TRICYCLEN PL BML
 VALERALDEHYDE PL BML

Early entries mostly from BML assuming
 EO=1%.

LAWSONIA INERMIS L.

“HENNA”
 “MIGNONETTE”

ACACETIN-7-O-GLUCOSIDE PL 411/
 AESCULETIN LF RAA
 APIGENIN-4'-GLUCOSIDE LF RAA
 APIGENIN-7-O-BETA-GLUCOSIDE LF
 CCO
 ARACHIDIC-ACID 5,375-11,730 SD
 WOI

ASH 47,500-52,780 SD WOI
 BEHENIC-ACID 945-2,065 SD WOI
 BETULINIC-ACID PL RAA
 BETULIN PL RAA
 CARBOHYDRATES 671,700-746,330 SD
 WOI
 COUMARINS 12,700-21,400 LF RAA
 1,2-DIHYDROXY-4-
 GLUCOSYLNAPHTHALENE LF RAA
 (20S)-3BETA-30-DIHYDROXYLUPANE
 BK CCO
 3BETA-30-DIHYDROXYLUP-20(29)-ENE
 BK CCO
 EO 100-200 FL HHB
 FAT 56,000-122,220 SD HHB WOI
 FIBER 335,000-372,200 SD WOI
 FRAXETIN LF RAA
 GALLIC-ACID LF CRC
 HENNADIOL BK CCO
 HENNOSIDES PL HHB
 3-BETA-HYDROXY-20-OXO-30-
 NORLUPANE PL RAA
 ALPHA-IONONE 20-40 FL HHB
 BETA-IONONE 80-160 FL HHB
 LACOUMARIN LF RAA
 LAWSONE 10,000 LF HHB
 LAWSONE 25,000 PE HHB
 LAXANTHONES PL JSG
 LINOLEIC-ACID 16,415-35,820 SD
 WOI
 LUPEOL PL RAA
 LUTEOLIN PL 411/
 LUTEOLIN-3'-GLUCOSIDE LF CCO
 LUTEOLIN-7-O-GLUCOSIDE LF CCO
 MANNITOL LF HHB
 1,4-NAPHTHAQUINONE LF RAA
 OLEIC-ACID 19,410-42,360 SD WOI
 PALMITIC-ACID 5,080-11,085 SD WOI
 PENTOSANS LF HHB
 PROTEIN 50,000-55,555 SD WOI
 QUINONE LF HHB
 RESEDINE PL RAA
 RESIN 20,000-30,000 LF HHB
 SCOPOLETIN LF RAA
 BETA-SITOSTEROL LF RAA
 BETA-SITOSTEROL-3-O-GLUCOSIDE PL
 411/
 STEARIC-ACID 8,835-19,285 SD WOI
 STIGMASTEROL LF RAA
 TANNINS 50,000-100,000 LF HHB
 N-TRIACONTANOL BK MPI
 N-TRIACONTYL-N-TRIDECANOATE BK
 MPI
 WATER 106,000 SD WOI

LEDUM PALUSTRE L.

"MARSH TEA"

"WILD ROSEMARY"

ALLOAROMADENDRENE LF HHB
 ARBUTIN LF HHB
 CATECHIN-TANNINS 80,000-170,000 LF HHB
 CITRIC-ACID PL HHB
 EO 3,000-25,000 LF CRC
 ERICINOL LF CRC
 ERICOLIN LF CRC
 5-HYDROXY-7,4'-DIMETHOXY-6-METHYLFLAVONE PL JSG
 HYPEROSIDE LF HHB
 LEDITANNIC-ACID LF CRC
 LEDOL LF CRC
 LEPALENE PL JSG
 MALIC-ACID PL HHB
 MYRCENE LF HHB
 OXALIC-ACID PL HHB
 PALUSTROL LF CRC
 QUERCETIN LF HHB
 TARTARIC-ACID PL HHB

LENS CULINARIS MEDIK.

"LENTIL"

ALANINE 11,720-13,200 SD USA
 ALANINE 3,560-11,865 SP USA
 AMYLASE SD WOI
 ARGININE 21,680-24,400 SD USA
 ARGININE 6,110-20,365 SP USA
 ASCORBIC-ACID 42-70 SD USA WOI
 ASCORBIC-ACID 148-605 SP USA
 ASH 21,000-30,875 SD USA WOI
 ASH 9,250-35,833 SP USA
 ASPARAGIN SP WOI
 ASPARTIC-ACID 31,020-34,900 SD USA
 ASPARTIC-ACID 14,330-47,765 SP USA
 BIOTIN 132 SD WOI
 CALCIUM 386-604 SD USA WOI
 CALCIUM 244-853 SP USA
 CARBOHYDRATES 597,000-642,800 SD USA WOI
 CARBOHYDRATES 221,400 SP USA
 BETA-CAROTENE 16 SD WOI
 BETA-CAROTENE 0.3-1 SP USA
 CHLORINE 636 SD WOI
 CHOLINE 2,230 SD WOI
 COPPER 8-9 SD USA
 COPPER 3.3-12 SP USA
 P-COUMARIC-ACID PL JSG

CYSTINE 3,680-4,145 SD USA
 CYSTINE 3,340 SP USA
 ESCULIN SD WOI
 FAT 7,000-11,800 SD USA WOI
 FAT 5,200-19,335 SP USA
 FERULIC-ACID PL JSG
 FIBER 49,000-61,675 SD USA
 FIBER 21,900-106,333 SP USA
 FOLACIN 1-4 SP USA
 FOLIC-ACID 1,070 SD WOI
 GADOLEIC-ACID 40-45 SD USA
 GLUTAMIC-ACID 43,500-49,000 SD USA
 GLUTAMIC-ACID 12,580-41,935 SP USA
 GLYCINE 3,190-10,635 SP USA
 HERMICELLULOSE SD WOI
 HISTIDINE 7,900-8,900 SD USA
 HISTIDINE 2,570-8,565 SP USA
 INOSITOL 1,300 SD WOI
 IODINE 0.025-0.03 SD WOI
 IRON 22-106 SD USA WOI
 IRON 30-116 SP USA
 ISOLEUCINE 12,120-13,650 SD USA
 ISOLEUCINE 3,260-10,865 SP USA
 KAEMPFEROL-7-O-BETA-D-GLUCOSIDE-O-ALPHA-L-RHAMNOSYL...PL JSG
 KAEMPFEROL-3-O-ALPHA-L-RHAMNOSIDE-BETA-D-GLUCOSYL...PL JSG
 KAEMPFEROL-3-RUTINOSYL-7-O-BETA-GLUCOSIDE PL JSG
 KAEMPFEROL-3-RUTINOSYL-7-O-ALPHA-L-RHAMNOSIDE PL JSG
 KILOCALORIES 3,380-3,805 SD USA
 KILOCALORIES 1,060-3,533 SP USA
 LEUCINE 20,340-22,900 SD USA
 LEUCINE 6,280-20,935 SP USA
 LINOLEIC-ACID 3,510-3,950 SD USA
 LINOLEIC-ACID 1,810-6,035 SP USA
 LINOLENIC-ACID 960-1,080 SD USA
 LINOLENIC-ACID 380-1,265 SP USA
 LYSINE 19,570-22,035 SD USA
 LYSINE 7,120-23,735 SP USA
 MAGNESIUM 765-1,280 SD USA WOI
 MAGNESIUM 345-1,323 SP USA
 MANGANESE 5-18 SP USA
 METHIONINE 1,050-3,500 SP USA
 MUFA 1,630-1,835 SD USA
 MUFA 1,040-3,465 SP USA
 MYRISTIC-ACID 30-34 SD USA
 NIACIN 17-30 SD USA WOI
 NIACIN 10-40 SP USA
 OLEIC-ACID 1,570-1,770 SD USA
 OLEIC-ACID 1,040-3,465 SP USA

OXALIC-ACID 212 SD WBB
 PALMITIC-ACID 1,160-1,300 SD USA
 PALMITIC-ACID 520-1,733 SP USA
 PALMITOLEIC-ACID 20-23 SD USA
 PANTOTHENIC-ACID 16-22 SD USA
 WOI
 PANTOTHENIC-ACID 5-20 SP USA
 PARAGALACTOARABAN SD WOI
 PHENYLALANINE 13,830-15,575 SD
 USA
 PHENYLALANINE 4,420-14,735 SP USA
 PHOSPHORUS 2,420-5,275 SD USA WOI
 PHOSPHORUS 1,610-6,165 SP USA
 PHOSPHATASE SD WOI
 PHYTASE SD WOI
 POTASSIUM 6,730-10,440 SD USA WOI
 POTASSIUM 3,000-11,495 SP USA
 PROLINE 11,720-13,200 SD USA
 PROLINE 3,560-11,865 SP USA
 PROTEIN 251,000-349,000 SD USA WOI
 PROTEIN 83,500-316,667 SP USA
 PUFA 4,470-5,035 SD USA
 PUFA 2,190-7,300 SP USA
 PYRIDOXINE 4.9 SD WOI
 RIBOFLAVIN 2-3 SD USA WOI
 RIBOFLAVIN 1-5 SP USA
 SERINE 12,930-14,560 SD USA
 SERINE 4,450-14,835 SP USA
 SFA 1,350-1,520 SD USA
 SFA 570-1,900 SP USA
 SODIUM 76-360 SD USA WOI
 SODIUM 56-545 SP USA
 STACHYOSE SD WOI
 STARCH 285,000 SD WOI
 STEARIC-ACID 140-160 SD USA
 STEARIC-ACID 60-200 SP USA
 SULFUR 1,220 SD WOI
 THIAMIN 2.6-6 SD USA WOI
 THIAMIN 2-8 SP USA
 THREONINE 10,060-11,325 SD USA
 THREONINE 3,280-10,935 SP USA
 TOCOPHEROL 20 SD WOI
 TRYPTOPHAN 2,510-2,826 SD WOI
 TYROSINE 7,500-8,445 SD USA
 TYROSINE 2,520-8,400 SP USA
 VALINE 13,920-15,675 SD USA
 VALINE 3,990-13,300 SP USA
 VIT-B6 5-6 SD USA
 VIT-B6 2-6.6 SP USA
 VIT-K 2.5 SD WOI
 WATER 111,900-124,000 SD WOI USA
 WATER 650,000-700,000 SP USA
 ZINC 37-42 SD USA
 ZINC 14-54 SP USA

LEONOTIS DYSOPHYLLA BENTH.

“WOODY LION’S-EAR”

8-BETA-HYDROXYMARRUBIN PL JSG
 LEONOTIN PL JSG

LEONOTIS LEONURUS (L.) R.
 BR.

“LION’S-EAR”

LEONITIN PL ID25:488
 MARRUBIIN 4,000 PL HHB
 RESIN 198,000 PL HHB WBB

LEONOTIS NEPETAEFOLIA (L.)
 R. BR.

“CATNIPLEAF LION’S-EAR”

ASH 59,000-65,000 SD CRC
 CARBOHYDRATES 336,000-368,000 SD
 CRC
 EO 20,000 SD HHB
 FAT 280,000-380,000 SD CRC
 FIBER 143,000-157,000 SD CRC
 FRUCTOSE SD HHB
 GLUCOSE SD HHB
 INOSITOL SD HHB
 LABALLENIC-ACID 44,800-60,800 SD
 CRC HHB
 LEONOTIN PL JSG
 LEONOTININ PL JSG
 LINOLEIC-ACID 33,320-45,220 SD CRC
 ID25:489
 METHOXYNEPETAEFOLIN PL JSG
 MYRISTIC-ACID 3,640-4,940 SD CRC
 ID25:489
 NEPETAEFOLIN LF HHB
 NEPETAEFOLININ PL ID25:487
 NEPETAEFOLINOL PL JSG
 NEPETAEFURAN LF HHB
 NEPETAEFURANOL LF HHB
 (-)-5,6-OCTADECADIENIC-ACID 44,800-
 60,800 SD CRC HHB
 OLEIC-ACID 180,880-245,480 SD CRC
 ID25:489
 PALMITIC-ACID 33,600-45,600 SD CRC
 ID25:489
 PROTEIN 236,000-288,000 SD CRC
 STEARIC-ACID 3,360-4,560 SD CRC
 ID25:489
 4,6,7-TRIMETHOXY-5-METHYL-
 CHROMEN-2-ONE PL ID25:488

4,6,7-TRIMETHOXY-5-
METHYLCOUMARIN PL JSG

LEONURUS CARDIACA L.

“MOTHERWORT”

8-BETA-ACETOXY-
9ALPHA,13ALPHA,15,16-
BIEPOXY...LABDANOLIDE PL 411/
AJUGOL PL JSG
AJUGOSIDE PL JSG
ALKALOIDS 3,500
APIGENIN-GLUCOSIDE PL 411/
ASCORBIC-ACID 42
BENZALDEHYDE 1
BUFENOLIDE
CAFFEIC-ACID-4-RUTINOSIDE PL
411/
CARYOPHYLLENE 40-200
CATECHIN
CHOLINE
CITRIC-ACID
EO 100-500
FAT 302,000 SD
GENKWANIN PL 411/
GLURIDOSUDE PL JSG
ALPHA-HUMULENE 35-175
HYPEROSIDE PL 411/
ISOQUERCITRIN PL 411/
KAEMPFEROL-GLUCOSIDE PL 411/
LEOCARDIN PL 411/
LEONURIDE PL 411/
LEONURIDINE
LEONURINE
LIMONENE 2
LINALOOL 1-4
MALIC-ACID
MARRUBIIN
3-OCTANOL
OLEANOLIC-ACID
ALPHA-PINENE 6-28
BETA-PINENE 1-2
PROTEIN 223,000 SD
PYROGALLIC-TANNIN
QUERCETIN PL 411/
QUERCITRIN PL 411/
QUINQUELOSIDE PL 411/
RESIN
RUTIN PL 411/
SAPONIN
STACHYDRINE
STACHYOSE RT CRC
TANNIN 21,000-90,000

URSOLIC-ACID
VIT-E

EO data largely from BML

LEPECHINIA CALYCINA EPLING

“EPLING’S LEPECHINIA”

BORNYL-ACETATE 5 PL BML
DELTA-CADINENE 40 PL BML
10-EPI-(ALPHA)-CADINOL 15 PL BML
CAMPHENE 390 PL BML
CAMPHOR 875 PL BML
DELTA-3-CARENE 870 PL BML
CARYOPHYLLENE 285 PL BML
1,8-CINEOLE 985 PL BML
P-CYMENE 35 PL BML
EO 5,000 PL BML
TRANS-BETA-FARNESENE 15 PL BML
GERANYL-ACETATE 5 PL BML
ALPHA-GURJUNENE 10 PL BML
ALPHA-HUMULENE 10 PL BML
ISOMENTHONE 10 PL BML
LIMONENE 115 PL BML
LINALOOL 130 PL BML
MENTHONE 30 PL BML
MYRCENE 85 PL BML
NEO-ISOPULEGOL TR PL BML
TRANS-NEROLIDOL 90 PL BML
ALPHA-PHELLANDRENE 30-50 PL BML
PHENETHYL-BUTYRATE 30 PL BML
PHENETHYL-2-METHYL-BUTYRATE
TR PL BML
ALPHA-PINENE 325 PL BML
BETA-PINENE 90 PL BML
PIPERITONE 40 PL BML
TERPINEN-4-OL 35 PL BML
ALPHA-TERPINENE 115 PL BML
GAMMA-TERPINENE 70 PL BML
ALPHA-TERPINEOL 75 PL BML
TERPINOLENE 45 PL BML
ALPHA-THUJENE 10 PL BML

LEPECHINIA SCHIEDIANA

(SCHLECHT.) VATKE

“SCHIEDE’S LEPECHINIA”

CAMPHENE 40 PL BML
CARYOPHYLLENE 200 PL BML
EO 4,000 PL BML
ALPHA-PINENE 200 PL BML
BETA-PINENE 3,000 PL BML

LEPIDIUM SATIVUM L.
"GARDEN CRESS"

ALKALOID 1,900-2,015 SD WOI
 L-ARABINOSE SD HHB
 ARACHIDIC-ACID 2,450-3,925 SD WOI
 ASCORBIC-ACID 690-6,510 LF USA WOI
 ASH 18,000-169,800 LF USA WOI
 ASH 57,000-60,440 SD WOI
 BEHENIC-ACID 2,750-4,410 SD WOI
 BENZYL-CYANIDE PL WOI
 BENZYL-ISOTHIOCYANATE PL WOI
 BENZYL-THIOCYANATE EO HHB
 CALCIUM 810-20,340 LF USA WOI
 CALCIUM 3,100-3,290 SD WOI
 CARBOHYDRATES 55,000-518,870 LF USA WOI
 BETA-CAROTENE 20-526 LF USA WOI
 CELLULOSE 9,150 SD WOI
 COBALT 0.012 LF WOI
 DIALLYL-SULFIDE EO HHB
 EO 1,150 PL WOI
 ERUCIC-ACID 910-8,585 LF USA
 FAT 7,000-66,040 LF USA WOI
 FAT 150,000-255,000 SD HHB WOI
 FIBER 11,000-103,775 LF USA
 GADOLEIC-ACID 610-5,755 LF USA
 D-GALACTURONIC-ACID SD HHB
 GLUCOTROPAEOLIN PL WOI
 D-GLUCURONIC-GALACTOSIDE SD HHB
 4-HYDROXY-3,5-DIMETHOXYCINNAMIC-ACID SD WOI
 IODINE 0.11 LF WOI
 IRON 13-286 LF USA WOI
 KILOCALORIES 320-3,020 LF CRC USA
 LIGNOCERIC-ACID 320-510 SD WOI
 LINOLEIC-ACID 1,520-14,340 LF USA
 LINOLENIC-ACID 760-7,170 LF USA
 LINOLENIC-ACID 44,550-71,400 SD WOI
 MUCILAGE 50,000 SD WOI
 MUFA 2,390-22,545 LF USA
 MYROSIN PL WOI
 NIACIN 10-95 LF USA WOI
 NICKEL 0.04 LF WOI
 OLEIC-ACID 870-8,210 LF USA
 OLEIC-ACID 97,450-156,200 SD WOI
 PALMITIC-ACID 160-1,510 LF USA
 PALMITIC-ACID 2,020-3,240 SD WOI
 PHOSPHORUS 760-7,170 LF WOI
 PHOSPHORUS 16,500-17,500 SD WOI
 POTASSIUM 6,060-57,170 LF USA

PROTEIN 26,000-327,685 LF USA WOI
 PROTEIN 235,000-249,180 SD WOI
 PUFA 2,280-21,500 LF USA
 L-RHAMNOSE SD HHB
 RIBOFLAVIN 1.7-25 LF USA WOI
 SFA 230-2,170 LF USA
 SINAPIC-ACID SD WOI
 SINAPIN SD WOI
 BETA-SITOSTEROL SD WOI
 SODIUM 140-1,320 LF USA
 STEARIC-ACID 70-660 LF USA
 STEARIC-ACID 9,560-15,325 SD WOI
 SULFUR 9,000-9,545 SD WOI
 THIAMIN 0.8-7.5 LF USA WOI
 ALPHA-TOCOPHEROL 7-66 LF USA
 ALPHA-TOCOPHEROL 1,830 OI WOI
 URIC-ACID 108 SD WOI
 VIT-B6 2.5-23 LF USA
 WATER 823,000-894,000 LF USA WOI
 WATER 56,900 SD WOI
 D-XYLOSE SD HHB

LEVISTICUM OFFICINALE KOCH
"LOVAGE"

ACETIC-ACID RT GEO
 TRANS-ANETHOLE TR RT BML
 ANGELIC-ACID RT HHB
 APIOLE TR SD BML
 BENZENE TR RT BML
 BENZOIC-ACID RT GEO
 BENZYL-ALCOHOL 3-30 RT BML
 TRANS-ALPHA-BERGAMOTENE 12-125 RT BML
 BERGAPTEN RT GEO
 BORNEOL TR RT BML
 BUTYL-DIHYDROPHthalIDE RT BML
 BUTYL-HEXAHYDROPHthalIDE RT BML
 BUTYLIDENE-PHthalIDE 153-1,535 RT BML
 BUTYLIDENE-PHthalIDES 700-7,000 RT GEO (?)
 BUTYL-PHthalIDE 153-1,535 RT BML
 N-BUTYRIC-ACID RT GEO
 DELTA-CADINENE 0-5 RT BML
 GAMMA-CADINENE 0-5 RT BML
 CALAMENENE 0-5 RT BML
 CAMPHENE 7-70 RT BML
 CAMPHOR 1-10 RT BML
 DELTA-3-CARENE 1-10 RT BML
 CARVACROL RT GEO
 CARVONE 10-100 RT BML

CARVOTANACETONE TR RT BML
 BETA-CHAMIGRENE 1-13 RT BML
 1,8-CINEOLE TR RT BML
 COPAENE 29-290 RT BML
 COUMARIN RT GEO
 COUMARINS 1,000-43,000 RT AYL
 CUPARENE 0-5 RT BML
 CUPARENENE 1-13 RT BML
 AR-CURCUMENE 1-13 RT BML
 P-CYMENE RT BML
 ALPHA-P-DIMETHYLSTYRENE 3-30 RT BML
 DIPHENYL RT BML
 BETA-ELEMENE 12-125 RT GEO
 EO 1,000-18,000 RT AYL GEO
 EO 8,000-11,000 SD GEO
 EO 500-2,450 PL GEO
 EUGENOL RT GEO
 EX RT DIURETIC AYL
 ALPHA-FENCHYL-ALCOHOL TR RT BML
 FAT 147,000 FR CRC
 FURFURAL 2-20 RT BML
 FURFUROL 1-10 RT BML
 GERANIOL TR RT BML
 HEXANOL 61-610 RT BML
 HYDROPHthalIDE-ACIDS RT GEO
 IMPERATORIN 13 FR ABS
 ISOSENKYUNOLIDE RT 411/
 ISOVALERIC-ACID RT GEO
 LIGUSTICIDE 215-2,150 RT BML
 LIMONENE 8-80 RT BML
 LIMONENE-10-OL 1-10 RT BML
 LINALOOL 3-30 RT BML
 MALEIC-ACID RT HHB
 MENTHOL TR RT BML
 5-METHOXYPSORALEN 6 FR ABS
 8-METHOXYPSORALEN 0-1 FR ABS
 2-METHYLBUTANAL TR RT BML
 MYRCENE 6-60 RT BML
 MYRISTIC-ACID RT GEO
 MYRISTICIN SD BML
 MYRTENOL TR RT BML
 CIS-OCIMENEN TR RT BML
 TRANS-OCIMENE TR RT BML
 2-OCTANONE TR RT BML
 4-OCTANONE TR RT BML
 OCTYL-ALDEHYDE RT GEO (?)
 PALMITIC-ACID RT GEO
 N-PENTYL-BENZENE RT BML
 ALPHA-PHELLANDRENE 1-10 RT BML
 BETA-PHELLANDRENE 24-240 RT BML
 PHTHALIDES 700-12,600 RT 411/
 ALPHA-PINENE 20-200 RT BML

BETA-PINENE 21-210 RT BML
 PROTEIN 200,000 FR CRC
 PSORALEN RT HHB
 PSORALEN 3 FR ABS
 RESIN RT HHB
 SEDANOIC-ACID RT GEO
 ALPHA-SELINENE 10-100 RT BML
 BETA-SELINENE 10-100 RT BML
 DELTA-SELINENE TR RT BML
 SENKYUNOLIDE RT 411/
 BETA-SITOSTEROL RT HHB
 STARCH RT HHB
 SUGAR RT HHB
 TERPINEN-4-OL TR RT BML
 ALPHA-TERPINENE 1-10 RT BML
 GAMMA-TERPINENE 3-30 RT BML
 D-ALPHA-TERPINEOL RT GEO
 ALPHA-TERPINEOL 8-80 RT BML
 THUJOPSENE 8-80 RT BML
 UMBELLIFERONE RT HHB
 VALIDENE-4,5-DIHYDROPHthalIDE RT 411/

LIGUSTRUM JAPONICUM

THUNB.

“JAPANESE PRIVET;
 LIGUSTRI FRUCTUS”

ACETYL-OLEANOLIC-ACID FR CCO
 ALPHA-AMYRIN FL CCO
 BETA-AMYRIN FL CCO
 ARSENIC 0.60 FR CAL 1/
 BENZALDEHYDE FL CCO
 BENZYL-ALCOHOL FL CCO
 BENZOIC-ACID FL CCO
 CAFFEIC-ACID FL CCO 2/
 CALCIUM 3,040 FR CAL
 COPPER 12 FR CAL
 P-COUMARIC-ACID LF HHB
 M-CRESOL FL CCO
 O-CRESOL FL CCO
 P-CRESOL FL CCO
 3,4-DIHYDROXY-BETA-PHENYLEHTYL-
 BETA-D-GLUCOPYRANOSIDE CCO
 N-DOCOSANE FL CCO
 N-DOCOSANOL FL CCO
 N-DOTRIACONTANE FL CCO
 N-EICOSANOL FL CCO
 EUGENOL FL CCO
 FAT 149,000 SD
 FERULIC-ACID FL CCO
 FRUCTOSE FR CCO
 GLUCOSE FR CCO
 GUAIACOL FL CCO

N-HENEICOSANE FL CCO
 N-HENEICOSANOL FL CCO
 N-HENTRIACONTANE FL CCO
 N-HEPTACOSANE FL CCO
 N-HEPTACOSANOL FL CCO
 N-HEXACOSANE FL CCO
 N-HEXACOSANOL FL CCO
 CIS-3-HEXEN-1-OL FL CCO
 P-HYDROXYCINNAMIC-ACID FR WOI
 2-(4-HYDROXYPHENYL)-ETHYL-BETA-D-GLUCOSIDE PL HHB
 10-HYDROXYOLEUROPEIN LF CCO
 P-HYDROXY-BETA-PHENYLETHYL-ALCOHOL FL CCO
 4-HYDROXY-BETA-PHENYLETHYL-BETA-D-GLUCOPYRANOSIDE BK CCO
 IRON 120 FR CAL
 KAEMPFEROL FL CCO
 LIGUSTALOSIDE-A LF CCO
 LIGUSTALOSIDE-B LF CCO
 LIGUSTROSIDE BK LF CCO
 LINALOOL FL CCO
 LINOLEIC-ACID FR CCO
 LUPEOL SD CCO
 MAGNESIUM 1,020 FR CAL
 MANGANESE 26 FR CAL
 ALPHA-MANNITE FR CCO
 MANNITOL LF WOI
 ALPHA-MANNITOL FR CCO
 2-METHYL-3-BUTENE-2-OL-2-O-BETA-APIOFURANOSYL-(1... BK CCO
 N-NONACOSANE FL CCO
 NONACOSANOL SD CCO
 N-NOADECANOL FL CCO
 NUZHIDE PL HHB
 N-OCTACOSANE FL CCO
 N-OCTACOSANOL FL CCO
 N-OCTADECANOL FL CCO
 OLEANOLIC-ACID FR CCO
 OLEUROPEIN BK LF FR CCO
 OLEIC-ACID FR CCO
 L-OLIVIL-BETA-D-GLUCOPYRANOSIDE BK CCO
 PALMITIC-ACID SD WOI
 N-PENTACOSANE FL CCO
 N-PENTACOSANOL FL CCO
 PHENOL EO FL CCO
 PHENETHYL-ALCOHOL FL CCO
 PHENYLACETIC-ACID FL CCO
 PHILLYRIN LF HHB
 D-PINORESINOL-BETA-D-GLUCOPYRANOSIDE BK CCO
 POTASSIUM 16,800 FR CAL

QUERCETIN FL CCO
 REDUCING-SUGARS 155,000 SD WOI
 SFA 29,055 SD WOI
 SODIUM 54 FR CAL
 STEARIC-ACID SD WOI
 D-SYRINGARESINOL-BIS-BETA-D-GLUCOPYRANOSIDE BK CCO
 SYRINGENIN BK LF CCO
 SYRINGIN BK LF WOI
 N-TETRACOSANE FL CCO
 N-TETRACOSANOL FL CCO
 N-TRIACONTANE FL CCO
 N-TRICOSANE FL CCO
 N-TRICOSANOL FL CCO
 N-TRITRIACONTANE FL CCO
 UFA 119,945 SD WOI
 URSOLIC-ACID FR CCO
 ZINC 24 FR CAL

1/ CAL mineral data may apply to L.
 lucidum. 2/Dried berries long used as
 coffee substitute in Japan (WOI,HHB)

LIGUSTRUM LUCIDUM AIT.

"PRIVET; CHINESE PRIVET;
 GLOSSY PRIVET;
 LIGUSTRI FRUCTUS"

ARSENIC 0.60 FR CAL
 CALCIUM 3,040 FR CAL
 COPPER 12 FR CAL
 FRUCTOSE FR CCO
 GLUCOSE FR CCO
 IRON 120 FR CAL
 LIGUSTALOSIDES PL JSG
 LIGUSTROSIDIC-ACID PL JSG
 LINOLEIC-ACID FR CCO
 MAGNESIUM 1,020 FR CAL
 MANGANESE 26 FR CAL
 ALPHA-MANNITOL FR CCO
 OLEANOLIC-ACID FR CCO
 OLEIC-ACID FR CCO
 OLEUROPEIN PL JSG
 POTASSIUM 16,800 FR CAL
 SODIUM 54 FR CAL
 ZINC 24 FR CAL

LIGUSTRUM VULGARE L.

"COMMON PRIVET"

BEHENIC-ACID BK HHB
 LIGUSTRONE BK HHB
 MALVIDIN-3-GLUCOSIDE LF HHB
 MANNITOL BK HHB

RESIN BK HHB
 SYRINGIC-ACID BK CRC
 SYRINGIN LF HHB
 SYRINGOPICRINE BK HHB
 TANNIN 70,000 BK HHB
 TANNIN 60,000-100,000 LF HHB

LINUM USITATISSIMUM L.

“FLAX; LINSEED”

ACETIC-ACID 3,105-3,853 SD HHB
 ALANINE .254 g/gN SD HOK*
 AMMONIA(NH₃) 3,000 SD NAP
 APIGENIN PL HHB
 L-ARABINOSE 4,950-6,600 SD HHB
 L-ARABANOFURANOSE SD HHB
 ARGININE 8.4g/16gN SD WOI
 ARGININE .554g/gN SD HOK*
 ARGININE 18,000 SD NAP
 ARSENIC TR SD WOI
 ASH 62,000-72,000 HA CRC
 ASH 26,000-49,000 SD CRC
 ASPARTIC-ACID .557g/gN SD HOK*
 AUXINE-ESTER SD HHB
 DELTA-5-AVENASTEROL SD HHB
 BARIUM TR SD WOI
 CAFFEIC-ACID-ESTER SP HHB
 CALCIUM 7,200 HA CRC
 CALCIUM 1,820-3,969 SD CRC WOI
 (as CaO, WOI)
 CALLISTEPHIN FL NAP
 CAMPESTEROL SD HHB
 CARBOHYDRATES 801,000-817,000 HA
 CRC
 CARBOHYDRATES 299,000-397,000 SD
 CRC
 BETA-CAROTENE 0-0.321 SD CRC
 BETA-CAROTENE SD HHB
 CAROTENES 0.321-1.07 SD WOI
 ALPHA-CEPHALINE SD HHB
 CEROTIC-ACID SD WOI
 CERYL-ALCOHOL SD WOI
 CERYL-CEROTATE SD WOI
 CHLORINE 42-78 SD WOI
 CHLOROGENIC-ACID PL HHB
 CHOLINE 910-1,180 SD WOI
 CHROMIUM TR SD WOI
 CHRYSANTHEMIN FL NAP
 COBALT TR SD WOI
 COLININ SD WOI
 P-COUMARIC-ACID-ESTER SP HHB
 CYANIDIN FL ABS
 CYANIDIN-3,5-DIGLUCOSIDE CY NAP

CYANIDIN-3-GLUCOSYL-RUTINOSIDE
 FL NAP
 CYANIDIN-3-O-BETA-D-GLUCOSYL-
 RUTINOSIDE FL NAP
 CYANIDIN-3-O-BETA-D-GLUCOSYL-
 RUTINOSIDE FL NAP
 CYANIDIN-3-TRIGLUCOSIDE FL NAP
 CYCLOARTENOL SD HHB
 CYCLOLINOPEPTIDE SD NAP
 CYSTEINE .090 g/gN SD HOK*
 DELPHINIDIN FL ABS
 DELPHINIDIN-3-DIGLUCOSIDE FL NAP
 DELPHINIDIN-3-O-BETA-D-GLUCOSIDE
 FL NAP
 DELPHINIDIN-3-GLUCOSYL-
 RUTINOSIDE FL NAP
 DELPHINIDIN-3-O-BETA-D-RUTINOSIDE
 FL NAP
 DELPHINIDIN-3-TRIGLUCOSIDE FL
 NAP
 DIASTASE SD WOI
 DICROTALIC-ACID SD HHB
 EICOSANOL SD HHB
 ERUCIC-ACID SD HHB
 FAT 33,000-61,000 HA CRC
 FAT 40,000-400,000 SD CRC HHB
 FERULIC-ACID-ESTER SD SP HHB
 FIBER 365,000-462,000 HA CRC
 FIBER 48,000-94,000 SD CRC
 FUCOSE SD HHB
 L-GALACTOSE 4,400-6,600 SD HHB
 GALACTURONIC-ACID 39,067-48,489 SD
 HHB
 GERANYL-GERANIOL SD HHB
 GLUCOSE SD HHB
 GLUTAMIC-ACID SD WOI
 GLUTAMIC-ACID 1.153g/gN SD HOK*
 GLYCINE .352g/gN SD HOK*
 O-GLYCOFLAVONE-C-GLYCOSIDE SD
 HHB
 HCN 6,920 FL WOI
 HCN 460 HU WOI
 HCN 670 RT WOI
 HCN 600 SD WOI
 HCN 1,280 SH WOI
 HETEROSIDE SP HEG
 HEXADECANOIC-ACID SD WOI
 HISTIDINE 1.5g/16gN SD WOI
 HISTIDINE .108g/gN SD HOK*
 P-HYDROXYBENZOIC-ACID SP HEG
 BETA-HYDROXY-BETA-METHYL-
 GLUTARIC-ACID-
 MONOMETHYLESTER SD HHB

IRON 29-549 SD CRC WOI
 (as Fe₂O₃; WOI)
 ISOLEUCINE 4.0g/16gN SD WOI
 ISOLEUCINE .237g/gN
 ISOORIENTIN LF HHB
 ISOVITEXIN LF HHB
 LEAD TR SD WOI
 LECITHIN 8,800 SD WOI
 LEUCINE 7.0g/16gN SD WOI
 LEUCINE .316g/gN SD HOK*
 LIGNANS PL PAS
 LIGNANDIGLUCOSIDE SD HHB
 LINAMARASE SD WOI
 LINAMARIN SD HHB
 LINASE SD WOI
 LINEIN PL HHB
 LININ SD WOI
 LINOCAFFEIN SD HHB
 LINOCINNAMARIN SD HHB
 LINOLEIC-ACID 30,000-100,000 SD HHB
 LINOLENIC-ACID 108,000-228,000 SD
 HHB
 ALPHA-LINOLENIC-ACID 108,000-
 228,000 SD HHB
 LINUSTATIN 1,700 SD? NAP
 LIPASE SD WOI
 LITHIUM TR SD WOI
 LOTAUSTRALIN SD HHB
 LUCENIN-1 LF HHB
 LUCENIN-2 LF HHB
 LUTEOLIN PL HHB
 LYSINE 2.5g/16gN SD WOI
 LYSINE .209g/gN
 MAGNESIUM 3,100 HA CGC
 MALIC-ACID SD WOI
 MAGNESIUM 3,715-7,002 SD WOI
 (as MgO)
 MANGANESE 8.1 HA CGC
 MANGANESE TR SD WOI
 METHIONINE 2.3g/16gN SD WOI
 METHIONINE .090g/gN SD HOK*
 24-METHYLENE-CYCLOARTENOL SD
 HHB
 METHYL-LINAMARIN SD HHB
 MOLYBDENUM TR SD WOI
 MUCILAGE 20,000-70,000 SD HHB WOI
 MYRISTIC-ACID SD HHB
 NEOLINUSTATIN 1,900 SD? NAP
 NIACIN 14.9 SD CRC
 NICKEL TR SD WOI
 OLEIC-ACID 39,000-120,000 SD HHB
 ORIENTIN LF HHB
 PANTOTHENIC-ACID SD WOI
 PECTIN 53,900-100,000 SD HHB WOI
 PELARGONIDIN-3-O-BETA-D-
 GLUCOSYL-RUTINOSIDE FL NAP
 PELARGONIDIN-3-O-BETA-D-
 RUTINOSIDE FL NAP
 PENTOSE 4,010-4,977 SD HHB
 PEROXIDASE CY NAP
 PHENYLALANINE 5.6g/16gN SD WOI
 PHENYLALANINE .239 g/gN SD HOK*
 PHOSPHORUS 1,110 HA CRC
 PHOSPHORUS 3,961-20,335 SD CRC WOI
 (as P₂O₃; WOI only)
 PHYTIN 64,000 SD WOI (defatted)
 PHYTOL SD HHB
 POTASSIUM 17,400 HA CRC
 POTASSIUM 7,964-15,009 SD CRC WOI
 (as K₂O)
 PROLINE .191g/gN SD HOK*
 PROTEIN 76,000-78,000 HA CRC
 PROTEIN 160,000-310,000 SD CRC WOI
 RAFFINOSE SD WOI
 RHAMNOGALACTURONAN SD ABS
 L-RHAMNOSE 7,150-15,840 SD HHB
 RIBOFLAVIN 1.7 SD HHB
 SECOISOLARICIRE SINOL PL PAS
 SERINE .248 SD HOK*
 SILICA 322-608 SD WOI
 SILVER TR SD WOI
 SINAPIC-ACID-ESTER SP HHB
 BETA-SITOSTEROL SD HHB
 SODIUM 538-1,014 SD CRC WOI (as
 Na₂O)
 SQUALENE SD HHB
 STEARIC-ACID SD WOI
 STIGMASTEROL SD HHB
 STRONTIUM TR SD WOI
 SULFUR 608-1,147 SD CRC WOI (as SO₃)
 THIAMIN 1.8 SD CRC
 THREONINE 5.1g/16gN SD WOI
 THREONINE .195 g/gN SD HOK*
 TIN TR SD WOI
 TITANIUM TR SD WOI
 TOCOPHEROL 47 SD WOI
 ALPHA-TOCOPHEROL 5 OI TOT
 GAMMA-TOCOPHEROL 573 OI TOT
 TRYPTOPHAN 1.5g/16gN SD WOI
 TRYPTOPHAN .089g/gN SD HOK
 TYROSINE .133g/gN SD HOK*
 VALINE 7.0g/16gN SD WOI
 VALINE .284g/gN SD HOK*
 VANADIUM TR SD WOI
 VICENIN-1 LF HHB
 VICENIN-2 LF HHB

VITEXIN LF HHB
 D-XYLOPYRANOSE SD HHB
 D-XYLOSE 13,750-14,850 SD HHB
 ZINC TR SD WOI

USDA's Marge Hoke gave me the g/gN amino acid numbers, as unpublished USDA calculating numbers. To get g nitrogen; divide protein by 5.30. This means that with protein at 16-31 g/100 g or 160-310 g/kg, there would be 30.19-58.49 g N/kg.

LIPPIA DULCIS TREV.

"SWEET HERB"

CAMPHOR PL HHB
 HERNANDULIN PL JSG
 LIPPIOL PL HHB
 QUERCETIN PL HHB

LIPPIA GRAVEOLENS HBK

"OREGANO"

CARVACROL LF AYL
 LAPACHENOLE 210 RT PM55:208
 LAPACHENOLE 40 SH PM55:208
 NARINGENIN 85 RT PM55:208
 NARINGENIN 70 SH PM55:208
 PINOCEMBRIN 95 RT PM55:208
 PINOCEMBRIN 105 SH PM55:208
 THYMOL LF AYL

LIQUIDAMBAR ORIENTALIS MILLER

"ORIENTAL STYRAX;
 ORIENTAL STORAX"

BENZYL-ALCOHOL RE HHB
 BENZYL-CINNAMATE RE HHB
 CINNAMIC-ACID 20,000-150,000 RE HHB JFM WOI
 CINNAMIC-ALCOHOL RE HHB
 CINNAMYL-CINNAMATE 50,000-100,000 RE WOI
 EO 5,000-10,000 RE WOI
 3-EPIOLEANOLIC-ACID RE HHB
 ETHANOL RE HHB
 ETHYL-CINNAMATE RE WOI
 MONOTROPEOSIDE PL HHB
 OLEANOLIC-ACID RE HHB
 PHENYLETHYLENE RE WOI
 PHENYLPROPYL-ALCOHOL RE HHB
 PHENYLPROPYL-CINNAMATE 100,000 RE WOI

ALPHA-SITOSTEROL RE HHB
 BETA-SITOSTEROL RE HHB
 SHIKIMIC-ACID PL HHB
 STORESIN 330,000-500,000 RE WOI
 ALPHA-STORESIN RE JFM
 BETA-STORESIN RE JFM
 STORESIN-CINNAMATE RE JFM
 STYRACIN 50,000-100,000 RE CCO JFM
 STYRENE EO WOI
 STYROL RE HHB
 TANNIN PL HHB
 VANILLIN RE HHB
 WATER 150,000-300,000 RE HHB

LIQUIDAMBAR STYRACIFLUA L.

"AMERICAN STYRAX;
 SWEETGUM"

ALUMINUM 10-1,800 ST USG
 ALUMINUM 40-1,230 LF USG
 ASH 20,000-120,000 ST USG
 ASH 40,000-82,000 LF USG
 ASH 52,000 SD CRC
 BARIUM 10-1,200 ST USG
 BARIUM 12-574 LF USG
 BENZYL-ALCOHOL RE HHB
 BENZYL-CINNAMATE RE GEO
 BORNEOL LF HHB
 BORNYL-ACETATE LF HHB
 BORON 2-60 ST USG
 BORON 6-84 LF USG
 CALCIUM 2,400-42,000 ST USG
 CALCIUM 3,720-18,860 LF USG
 CHROMIUM 0.04-3.6 ST USG
 CHROMIUM 0.08-8.2 LF USG
 CINNAMIC-ACID 50,000-230,000 RE GEO HHB
 CINNAMIC-ALCOHOL RE HHB
 CINNAMYL-CINNAMATE 50,000-10,000 RE GEO
 COBALT 0-3.6 ST USG
 COBALT 0-0.57 LF USG
 COPPER 0.6-360 ST USG
 COPPER 2.8-164 LF USG
 CYANIDIN LF HHB
 DELPHINIDIN LF HHB
 ELLAGIC-ACID LF HHB
 EO 150,000-200,000 RE WOI
 EO 800 LF HHB
 3-EPIOLEANOLIC-ACID RE HHB
 ETHANOL RE HHB
 ETHYL-CINNAMATE RE GEO
 FAT 297,000 SD HHB

FLUORINE 0-0.12 ST USG
 IODINE 3-6 ST USG
 KAEMPFEROL-3-GLUCOSIDE LF HHB
 LANTHANUM 0.6-18 ST USG
 LANTHANUM 1.2-8.2 LF USG
 LEAD 0.2-57 ST USG
 LEAD 0.4-25 LF USG
 MAGNESIUM 200-8,400 ST USG
 MAGNESIUM 280-5,740 LF USG
 MANGANESE 14-2,400 ST USG
 MANGANESE 60-2,460 ST USG
 MONOTROPEOSIDE PL HHB
 MYRICETIN-3-GLUCOSIDE LF HHB
 MYRICITRIN LF HHB
 NEODYMIUM 1.4-24 ST USG
 NEODYMIUM 2.8-16.4 LF USG
 NICKEL 0-18 ST USG
 NICKEL 0.3-24.6 LF USG
 OLEANOLIC-ACID RE HHB
 PHENYLPROPYL-ALCOHOL RE HHB
 PHENYLPROPYL-CINNAMATE 100,000
 RE GEO
 PHOSPHORUS 60-2,880 ST USG
 PHOSPHORUS 360-2,952 LF USG
 POTASSIUM 260-33,600 ST USG
 POTASSIUM 2,800-18,860 LF USG
 PROTEIN 331,000 RE HHB
 QUERCETIN-3-GLUCOSIDE LF HHB
 QUERCITRIN LF HHB
 SELENIUM 0.01-0.4 USG
 SILVER 0-0.24 ST USG
 ALPHA-SITOSTEROL RE HHB
 BETA-SITOSTEROL RE HHB
 SHIKIMIC-ACID PL HHB
 SODIUM 30-220 USG
 STRONTIUM 6-840 ST USG
 STRONTIUM 8-246 LF USG
 STYRENE RE WOI
 STYROCAMPHENE? 4,000 RE GEO
 TANNIN PL HHB
 TITANIUM 0.1-36 ST USG
 TITANIUM 1-57 LF USG
 TUNGSTEN 0.6-3.6 ST USG
 TUNGSTEN 1-5.7 LF USG
 VALERANAL LF CCO
 VALERANONE LF CCO
 VANADIUM 0.1-2.4 ST USG
 VANADIUM 0.2-2.46 LF USG
 VANILLIN RE HHB
 VITISPIRANE LF CCO
 WATER 150,000-300,000 RE HHB
 YTTERBIUM 0.04-0.84 ST USG
 YTTERBIUM 0.08-24.6 LF USG
 YTTRIUM 0.1-18 ST USG

YTTRIUM 0.2-24.6 LF USG
 ZINC 4-240 ST USG
 ZINC 12-98 LF USG
 ZIRCONIUM 2-5 USG

LOBELIA INFLATA L.

"INDIAN TOBACCO"

ALKALOIDS 4,800 PL HHB
 ALUMINUM 251 LF PED
 ASCORBIC-ACID 2,252 LF PED
 ASH 49,000 LF PED
 CALCIUM 7,020 LF PED
 CAOUTCHOUC LX CRC
 CARBOHYDRATES 832,000 LF PED
 BETA-CAROTENE 53.5 LF PED
 CHELIDONIC-ACID PL HHB
 CHROMIUM 5 LF PED
 COBALT 22 LF PED
 8,10-DIETHYL-LOBELIDIOL PL CRC
 8-ETHYL-NORLOBEOL-I PL CRC
 8-ETHYL-10-PHENYL-
 NORLOBELIDIONE PL HHB
 FAT 28,000 LF PED
 FAT 30,000 SD HHB
 FIBER 88,000 LF PED
 IRON 310 LF PED
 ISOLOBANANIDINE PL CRC
 ISOLOBININE PL CRC
 KILOCALORIES 3,000 LF PED
 LOLOBANIDINE-I PL CRC
 LOLOBANIDINE-II PL CRC
 LINOLEIC-ACID PL PED
 LOBELANIDINE PL CCO
 LOBELANINE PL PED
 LOBELINE 3,600-22,500 PL CRC PED
 DL-LOBELINE PL CCO
 LOBINALIDINE PL CRC
 LOBINALINE PL CRC
 LOBINANIDINE PL JSG
 LOBININE PL CRC
 MAGNESIUM 1,620 LF PED
 MANGANESE 80 LF PED
 8-METHYL-10-ETHYL-LOBELIDIOL PL
 CRC
 8-METHYL-10-PHENYL-LOBELIDIOL PL
 CRC
 NIACIN 33 LF PED
 NORLELOBANIDINE PL CRC
 NORLOBELANIDINE PL CRC
 NORLOBELANINE PL CRC
 D-8-PHENYL-LOBEOL-I PL HHB
 L-8-PHENYL-LOBEOL-I PL HHB

BETA,BETA-PHENYLOXYPROPIONIC-
ACID PL HHB
PHOSPHORUS 1,540 LF PED
POTASSIUM 12,600 LF PED
PROTEIN 91,000 LF PED
PYRIDINE-ALKALOIDS 4,000-5,000 PL
PED
RESIN PL CRC
RIBOFLAVIN TR LF PED
SELENIUM 5 LF PED
SILICON 8 LF PED
SODIUM 150 LF PED
STEARIC-ACID PL PED
THIAMIN 3.2 LF PED
TIN 7 LF PED
WATER 887,000 LF PED
ZINC 4 LF PED

1/PED=Pedersen, M. 1987.

LOBELIA TUPA L.

“DEVIL’S TOBACCO”

LOBELAMIDINE PL CRC
LOBELINE PL CRC
NEOLOBELAMIDINE PL CRC

LOLIUM TEMULENTUM L.

“DARNEL”

“TARES”

ASH 119,000 SD CRC
CARBOHYDRATES 562,000 SD CRC
FAT 14,000-26,000 SD CRC
FIBER 390,000 SD CRC
FRUCTOSANS SD HHB
GELATINASE PL HHB
LABENZYME PL HHB
LOLINE SD CRC
PERLOLINE PL HHB
PROTEIN 109,000-162,000 SD CRC
STARCH SD CRC
TEMULENTIN SD HHB
TEMULENTINIC-ACID SD HHB
TEMULINE 600SD HHB

LONICERA JAPONICA THUNB.

“JAPANESE HONEYSUCKLE”

ARACHIDIC-ACID FL CCO
ARSENIC 0.09 FL CAL
AUROXANTHIN FR HHB

CALCIUM 7,390 FL CAL
CERYL-ALCOHOL BUD CCO
COPPER 13 FL CAL
CRYPTOXANTHIN FR WBB
ELAIDIC-ACID FL CCO
HCN PL WBB
INOSITOL FL CCO
IRON 350 FL CAL
LINOLEIC-ACID FL CCO
LINOLENIC-ACID FL CCO
LOGANIN FL CCO
LONICERIN 100 PL CCO HHB
LUTEOLIN FL CCO
LUTEOLIN-7-RHAMNOGLUCOSIDE PL
HHB
MAGNESIUM 2,990 FL CAL
MANGANESE 70 FL CAL
MERCURY 0.03 FL CAL
MYRISTIC-ACID FL CCO
POTASSIUM 20,100 FL CAL
SAPONIN PL CCO
SODIUM 80 FL CAL
TANNIN 80,000 PL CCO WBB
ZINC 21 FL CAL

LOPHATHERUM GRACILE

BROGN.

“DAN ZHU YE”

ARSENIC 0.12 PL CAL
ARUNDOIN PL CCO
CALCIUM 2,380 PL CAL
COPPER 8-9 PL CAL
CYLINDRIN PL CCO
FRIEDELIN PL CCO
IRON 240 PL CAL
MAGNESIUM 2,490 PL CAL
MANGANESE 445 PL CAL
MERCURY 0.02 PL CAL
POTASSIUM 22,400 PL CAL
SODIUM 128 PL CAL
TARAXEROL PL CCO
ZINC 25 PL CAL

LOPHOPHORA WILLIAMSII

(LEMAIRE) COULT.

“PEYOTE”

N-ACETYL-ANHALAMINE PL HHB
N-ACETYL-ANHALONINE PL HHB
N-ACETYL-3-DEMETHYLMESCALINE
PL HHB

N-ACETYLMESCALINE PL ALK
 ALKALOIDS 50,000 PL HHB
 ANHALAMINE PL ALK
 ANHALIDINE PL ALK
 ANHALININE PL ALK
 ANHALONIDINE PL ALK
 ANHALONINE PL ALK
 ANHALOTINE PL HHB
 CANDICINE PL HHB
 DEMETHYL-MESCALINE PL ALK
 3,4-DIMETHOXYPHENETHYLEMINE PL
 HHB
 N-FORMYL-ANHALAMINE PL HHB
 N-FORMYL-ANHALONIDINE PL HHB
 N-FORMYL-ANHALONINE PL HHB
 N-FORMYL-3-DEMETHYLMESCALINE
 PL HHB
 N-FORMYL-MESCALINE PL HHB
 N-FORMYL-O-METHYL-
 ANHALONIDINE PL ALK
 HORDENINE PL HHB
 LOPHOPHORINE PL ALK
 LOPHOTINE PL HHB
 MESCALINE PL ALK
 MESCALINE-CITRIMIDE PL HHB
 MESCALINE-MALEIMIDE PL HHB
 MESCALINE-MALIMIDE PL HHB
 MESCALINE-ISOCITRIMIDE-LACTONE
 PL HHB
 MESCALINE-SUCCINIMIDE PL HHB
 MESCALOTAM PL HHB
 O-METHYL-ANHALONIDINE PL ALK
 N-METHYL-MESCALINE PL ALK
 N-METHYL-TYRAMINE PL HHB
 PELLOTINE PL ALK
 PEYOGLUNOL PL HHB
 PEYOGLUTAM PL HHB
 PEYONINE PL HHB
 PEYOPHORINE PL HHB
 PEYORUVIC-ACID PL HHB
 PEYOTINE PL HHB
 PEYOXYLIC-ACID PL HHB
 TYRAMINE PL HHB

LUFFA AEGYPTIACA MILLER

"LUFFA; SMOOTH LOOFAH;
 VEGETABLE SPONGE"

AEGYPTININ-A PL JSJ
 AMARIN SD RAA
 ASCORBIC-ACID 120-2,400 FR USA
 ASCORBIC-ACID 950-9,596 LF CRC
 ASH 4,000-80,000 FR USA

ASH 7,000-71,000 LF CRC
 CALCIUM 200-4,000 FR USA
 CALCIUM 560-55,000 LC CRC
 CARBOHYDRATES 43,600-872,000 FR
 USA
 CARBOHYDRATES 27,000-804,000 LF
 CRC
 BETA-CAROTENE 1.2-34 FR USA
 BETA-CAROTENE 92-933 LF CRC
 CHOLINE 104-2,090 FR WOI
 CUCURBITACIN-B PL HHB
 FAT 2,000-40,000 FR USA
 FAT 200,000-450,000 SD HHB
 FAT 0-17,000 LF CRC
 FIBER 5,000-100,000 FR USA
 FIBER 15,000-152,000 LF CRC
 GYPSOGENIN SD HHB
 GYPSOGENIN-LACTONE SD HHB
 IRON 3-80 FR USA
 IRON 115-1,162 LF CRC
 KILOCALORIES 200-4,000 FR USA
 KILOCALORIES 140-2,730 LF CRC
 LINOLEIC-ACID 870-17,400 FR USA
 LINOLEIC-ACID 94,000-211,500 SD HHB
 LUFFAMARIN SD HHB
 MAGNESIUM 140-2,800 FR USA
 MUFA 370-7,400 FR USA
 NIACIN 4-80 FR USA
 OLEANOLIC-ACID SD RAA
 OLEIC-ACID 370-7,400 FR USA
 OLEIC-ACID 60,000-135,000 SD HHB
 PALMITIC-ACID 110-2,200 FR USA
 PALMITIC-ACID 18,000-40,500 SD HHB
 PHOSPHORUS 190-6,400 FR USA WOI
 PHOSPHORUS 330-14,141 LF CRC
 PHOSPHORUS 18,300 SD WOI
 PHYTIN FR WOI
 POTASSIUM 1,390-27,800 FR USA
 PROTEIN 12,000-240,000 FR USA
 PROTEIN 16,000-515,000 LF CRC
 PUFA 870-17,400 FR USA
 RIBOFLAVIN 0.6-12 FR USA
 RIBOFLAVIN 0.6-6 LF CRCN
 SFA 160-3,200 FR USA
 SODIUM 30-600 FR USA
 ALPHA-SPINASTEROL
 STEARIC-ACID 50-1,000 FR USA
 STEARIC-ACID 36,000-81,000 SD HHB
 THIAMIN 0.5-10 FR USA
 THIAMIN 0.5-5 LF CRC
 WATER 930,000-950,000 FR USA
 (ROUNDED)
 WATER 901,000-940,000 LF CRC

LUPINUS ALBUS L.**"WHITE LUPINE"**

ACYCLOXYLUPANINE SD HHB
 ALANINE 12,960-14,470 SD USA
 ALBINE PL JSG
 ALKALOIDS 10,000-27,400 SD HHB
 ALLANTOIC-ACID SP HHB
 ALLANTOIN SP HHB
 ANGUSTIFOLINE 5-30 SD HHB
 ARGININE 38,770-44,400 SD HHB USA
 ASH 32,800-36,580 SD USA
 ASPARTIC-ACID 38,770-43,290 SD USA
 ASPARAGINE 116,340 SD HHB
 CALCIUM 1,760-1,965 SD USA
 CARBOHYDRATES 367,000-450,370 SD HHB USA
 CEPHALIN SD HHB
 CITRIC-ACID SD HHB
 COPPER 10-12 SD USA
 CYSTINE 4,460-4,980 SD USA
 DEHYDROALBINE PL JSG
 5-DEHYDRO-13-HYDROXYMULTIFLORONE SD HHB
 5-DEHYDRO-13-OXYMULTIFLORINE SD HHB
 22,23-DIHYDROSTIGMASTEROL SD HHB
 ERUCIC-ACID 930-1,040 SD USA
 FAT 97,400-108,630 SD USA
 FIBER 137,700-153,600 SD USA
 GADOLEIC-ACID 2,550-2,850 SD USA
 GLUTAMIC-ACID 21,650-96,985 SD HHB USA
 GLYCINE 15,390-17,185 SD USA
 GLYCOLIC-ACID SD HHB
 HISTIDINE 10,300-11,500 SD USA
 HOMOGENISINIC-ACID SP HHB
 HYDROXYLUPANINE 19-290 SD HHB
 13-HYDROXYMULTIFLORONE SD HHB
 IRON 43-49 SD USA
 ISOLEUCINE 16,150-18,030 SD USA
 KILOCALORIES 3710-4,140 SD USA
 LAURIC-ACID 80-90 SD USA
 LECITHIN SD HHB
 LEUCINE 19,000-30,625 SD HHB USA
 LINOLEIC-ACID 19,950-22,275 SD USA
 LINOLENIC-ACID 4,460-4,980 SD USA
 LUPANINE 40-140 SD HHB
 LUPEOL SD HHB
 LYSINE 19,330-21,585 SD USA
 MAGNESIUM 1,980-2,200 SD USA
 MALIC-ACID SD HHB

METHIONINE 2,550-2,850 SD USA
 METHYL-ALBINE SD HHB
 MUFA 39,400-43,990 SD USA
 MULTIFLORINE SD HHB
 MYRISTIC-ACID 130-145 SD USA
 NIACIN 22-24 SD USA
 OLEIC-ACID 35,580-39,725 SD USA
 OXALIC-ACID SD HHB
 13-OXYMULTIFLORINE SD HHB
 PALMITIC-ACID 7,420-8,275 SD USA
 PALMITOLEIC-ACID 340-380 SD USA
 PHENYLALANINE 14,350-16,025 SD USA
 PIPECOLIC-ACID ST HHB
 PHOSPHORUS 4,400-4,900 SD USA
 POTASSIUM 10,130-11,300 SD USA
 PROLINE 14,760-16,480 SD USA
 PROTEIN 361,700-403,400 SD USA
 PUFA 24,390-27,235 SD USA
 RIBOFLAVIN 2-3 SD USA
 SERINE 18,690-20,870 SD USA
 SFA 11,560-12,895 SD USA
 SODIUM 150-165 SD USA
 (-)-SPARTEINE SD HHB
 STEARIC-ACID 3,160-3,525 SD USA
 SUCCINIC-ACID SD HHB
 THIAMIN 6-7 SD USA
 THREONINE 13,310-14,860 SD USA
 TRIGONELLINE SP HHB
 TRYPTOPHAN 2,890-3,225 SD USA
 TYROSINE 13,600-15,185 SD USA
 VALINE 15,100-16,860 SD USA
 VANILLIN SD HHB
 VERNINE SD HHB
 WATER 104,400 SD USA
 ZINC 47-53 SD USA

LUPINUS MUTABILIS SWEET**"ANDEAN LUPINE"****"CHOCHO"****"TARHUT"**

ASH 8,000-28,000 FR CRC
 ASH 35,000-39,000 SD PAN
 CALCIUM 280-980 FR CRC
 CALCIUM 900-1,000 SD PAN
 CARBOHYDRATES 90,000-315,000 FR CRC
 CARBOHYDRATES 299,000-334,000 SD PAN
 BETA-CAROTENE 0.3-1.0 FR CRC
 BETA-CAROTENE 1.3-1.5 SD PAN
 FAT 51,000-178,000 FR CRC
 FAT 140,000-240,000 SD NAS PAN

FIBER 6,000-21,000 FR CRC
 FIBER 88,000-98,000 SD PAN
 IRON 19-66 FR CRC
 IRON 55-60 SD PAN
 KILOCALORIES 1,260-4,405 FR CRC
 KILOCALORIES 4,070-4,675 SD CRC
 PAN
 (+)-LUPANINE SD HHB
 NIACIN 8-28 FR CRC
 NIACIN 25-29 SD PAN
 PHOSPHORUS 1,680-5,875 FR CRC
 PHOSPHORUS 6,350-7,100 SD PAN
 PROTEIN 137,000-479,000 FR CRC
 PROTEIN 410,000-510,000 SD NAS PAN
 RIBOFLAVIN 1.5-5.2 FR CRC
 RIBOFLAVIN 4.4-4.9 SD PAN
 (-)-SPARTEINE SD HHB
 THIAMIN 0.9-3.1 FR CRC
 THIAMIN 4.7-5.2 SD PAN
 WATER 714,000 FR CRC
 WATER 77,000-104,000 SD PAN

LYCIUM CHINENSE MILL.

"WOLFBERRY"

ARSENIC 0.73 RT BK CAL
 ARSENIC 0.44 FR CAL
 ASCORBIC-ACID 80-769 LF CRC
 ASH 17,000-163,000 LF CRC
 ASPARAGINE LF HHB
 BETAINE 1,000 FR CCO
 CALCIUM 1,170 FR CAL
 CALCIUM 1,480-14,231 LF CRC
 CALCIUM 53,900 RT BK CAL
 CARBOHYDRATES 40,000-385,000 LF
 CRC
 BETA-CAROTENE 44-428 LF CRC
 COPPER 15 FR CAL
 COPPER 17 RT BK CAL
 L-1,2-DEHYDRO-ALPHA-
 CYPERONE...NAPHTHALENONE FR
 CCO
 6,7-EPOXY-5,20-DIHYDROXY-1-
 OXOWITHA-2,24-DIENOLIDE PL JSG
 6,7-EPOXY-5-HYDROXY-1-OXOWITHA-
 2,24-DIENOLIDE PL JSG
 FAT 6,000-58,000 LF CRC
 FAT 191,000 SD CRC
 FIBER 13,000-125,000 LF CRC
 IRON 140 FR CAL
 IRON 54-519 LF CRC
 IRON 670 RT BK CAL
 KILOCALORIES 290-2,790 LF CRC

KUKOAMINE-A RT CCO
 LINOLEIC-ACID FR CCO
 MAGNESIUM 1,060 FR CAL
 MAGNESIUM 2,610 RT BK CAL
 MANGANESE 21 FR CAL
 MANGANESE 91 RT BK CAL
 MERCURY 0,08 FR CAL
 NIACIN 8-77 LF CRC
 PHOSPHORUS 430-4,135 LF CRC
 PHYSALEIN FR CCO
 POTASSIUM 16,700 FR CAL
 POTASSIUM 5,180-49,808 LF CRC
 POTASSIUM 8,110 RT BK CAL
 PROTEIN 41,000-394,000 LF CRC
 PROTEIN 162,000 SD CRC
 RIBOFLAVIN 3.1-30 LF CRC
 RUTIN LF CCO
 BETA-SITOSTEROL-BETA-D-GLU-
 COSIDE PL HHB
 SODIUM 2,140 FR CAL
 SODIUM 1,910-18,365 LF CRC
 SODIUM 793 RT BK CAL
 SOLAVETIVONE FR CCO
 THIAMIN 0.8-7.7 LF CRC
 WATER 896,000 LF CRC
 ZEAXANTHIN FR CCO
 ZINC 20 FR CAL
 ZINC 23 RT BK CAL 1/

1/ Some data may as well apply to L.
 barbarum (CAL; CCO)

LYCOPERSICON LYCOPERSICUM (L.) KARSTEN

"TOMATO"

ABSCISIC-ACID LF NAP
 ABSCISIC-ACID-1',4'-TRANS-DIOL FR
 NAP LF NAP
 ABSCISIC-ACID-1'O-BETA-D-
 GLUCOPYRANOSIDE ST NAP
 ACETALDEHYDE FR HUL
 ACETIC-ACID FR HUL
 ACETONE FR HUL
 TRANS-ACONITIC-ACID FR HUL
 ADENOSINE FL NAP
 ALANINE 30-4,132 FR HUL USA
 BETA-ALANINE 6 FR HUL
 ALUMINUM 0.3-1,700 FR AAS USG
 GAMMA-AMINO-BUTYRIC-ACID 220-
 480 FR HUL
 ALPHA-AMYRIN FR HUL
 BETA-AMYRIN FR HUL

- ARABIC-ACID FR HHB WOI
 ARGININE 1-3,637 FR HUL USA
 ARSENIC 0.00345-0.0425 FR USG
 ASCORBIC-ACID 50-2,952 FR HUL
 USA
 ASH 5,700-105,461 (-200,000) FR AAS
 USA USG
 ASPARAGINE 300 FR HUL
 ASPARTIC-ACID 1,230-20,332 FR USA
 AUROXANTHIN FR NAP
 BARIUM 0-60 FR USG
 BENZALDEHYDE FR HUL
 BENZYL-ALCOHOL FR HHB
 BETAINE 23 RT NAP
 BETAINE 69 SH NAP
 BIOTIN FR WOI
 BORON 0-96 FR BOBHUL USG
 BUTANOLS FR HUL
 BUTANOL-2-ON-3 FR HHB
 2-BUTANONE FR HUL
 1-BUTYL-2-THIAZOL FR HHB
 BUTYROLACTONE FR HHB
 CADMIUM 0.005-1.7 FR AAS USG
 CAFFEIC-ACID 6 FR HUL
 CAFFEIC-ACID-4-O-BETA-D-GLU-
 COSIDE FR NAP
 CALCIUM 60,800 LF HUL
 CALCIUM 60-2,400 (-9,200) FR AAS HUL
 USA USG
 CAMPESTEROL FR HUL
 ALPHA-CAPROLACTONE FR HHB
 CAPRYLIC-ACID FR HHB
 CARBOHYDRATES 43,400-717,400 FR
 CRC
 CARBOXYLIC-ACID LF HUL
 BETA-CAROTENE 7-113 FR HUL USA
 GAMMA-CAROTENE FR HUL
 ZETA-CAROTENE FR HUL
 CELLULASE FR HUL
 CELLULOSE FR HUL
 CERIUM 7-60 FR USG
 CHLORINE 510 FR WOI
 CHLOROGENIC-ACID 18 FR HUL
 CHLOROPHYLL 3-30 FR WOI
 CHLOROPHYLL-A FR HUL
 CHLOROPHYLL-B FR HUL
 CHOLINE 36 RT NAP
 CHOLINE 48 SH NAP
 CHROMIUM 0-3 FR USG
 CINNAMALDEHYDE FR HHB
 CITRAL FR HUL
 CITRIC-ACID FR HUL
 CITROSTADIENOL SD NAP
 COBALT 0-1.4 FR USG
 COPPER 0.4-100 FR HUL USA USG
 P-COUMARIC-ACID FR HUL
 P-COUMARIC-ACID-O-BETA-D-
 GLUCOSIDE FR NAP
 1-O-P-COUMAROYL-BETA-D-GLUCOSE
 FR NAP
 O-CRESOL FR HHB
 CUTIN FR HHB
 CYCLOARTANOL SD NAP
 CYCLOARTENOL SD NAP
 CYCLOEUCALENOL SD NAP
 CYCLOHEXANOL FR NAP
 CYSTINE 120-1,984 FR USA
 DAMASCENONE FR NAP
 DECADIEN-TRANS-2,TRANS-4-AL FR
 HHB
 DIACETYL FR HUL
 10,16-DIHYDROXY-DECANOIC-ACID
 FR HUL
 10,16-DIHYDROXY-HEXADECANOIC-
 ACID FR HHB
 DIHYDROXYTARTARIC-ACID FR HUL
 DIHYDROZEATIN FL NAP
 4-ALPHA-24-DIMETHYL-CHOLESTA-
 7,24-DIEN-3-BETA-OL SD NAP
 2,7-DIMETHYL-OCTA-2,4-DIENOIC-ACID
 1.8 SH NAP
 2,7-DIMETHYL-OCT-4-ENEDIOIC-ACID
 1.2 SH NAP
 N-DOTRIACONTANE FR HHB
 1',2'-EPOXY-1',2'-DIHYDRO-BETA-PSI-
 CAROTENE FR NAP
 1',2'-EPOXY-1',2'-DIHYDRO-BETA-
 EPSILON-PSEUDOCAROTENE FR NAP
 1,2-EPOXY-1,2-DIHYDRO-PSI,PSI-
 CAROTENE FR NAP
 5,6-EPOXY-5,6-DIHYDRO-PSEUDO-
 PSEUDOCAROTENE FR NAP
 EPOXY-LUTEIN FR NAP
 EPOXY-5,6-IONENE FR HHB
 ETHANOL FR HUL
 ETHYLENE FR NAP
 24-(R)-ETHYL-LOPHENOL SD NAP
 ETHYL-PHENOL FR HHB
 EUGENOL FR HHB
 FALCARINDIOL SD NAP
 FALCARINOL SD NAP
 FARNESAL FR HHB
 FARNESYL-ACETONE FR HHB
 FAT 1,330-47,441 FR USA
 FAT 150,000-250,000 SD HHB WOI
 FERULIC-ACID FR HUL

FERULIC-ACID-O-BETA-D-GLUCOSIDE
 FR NAP
 1-O-FERULOYL-BETA-D-GLUCOSE FR
 NAP
 3-O-FERULOYL-QUINIC-ACID LF NAP
 FIBER 4,700-77,691 FR USA
 FLUORINE 0.02-1.7 FR AAS
 FOLACIN 0-2 FR USA
 FORMIC-ACID FR HUL
 FRUCTOSE 11,700 FR HUL
 FUMARIC-ACID FR HUL
 FURFURAL FR HUL
 5ALPHA-FUROSTANE-
 3BETA,22,26TRIOL-3-O-BETA-D-
 GLUCOPYRANOSYL...PL JSG
 GALACTURONIC-ACID FR HUL
 GENTISIC-ACID LF NAP
 GERANYL-ACETONE FR HHB
 GIBBERELLINS FR NAP
 BETA-D-GLUCOPYRANOSYL-PHASEIC-
 ACID
 GLUCOSE 16,300 FR HUL
 GLUTAMIC-ACID 90-54,053 FR HUL
 GLYCERIC-ACID FR HHB
 GLYCOLIC-ACID FR HHB
 GLYCINE 23-3,637 FR HUL USA
 GLYOXAL FR HUL
 GRAMISTEROL SD NAP
 GUAIACOL FR HHB
 HEMICELLULOSE FR HUL
 N-HENTRIACONTANE FR HHB
 HEPTADIEN-TRANS-2,CIS-4-AL FR HHB
 HEPTADIEN-TRANS-2,TRANS-4-AL FR
 HHB
 HEPTULOSE FR HUL
 HEXADIEN-TRANS-2,TRANS-4-AL FR
 HHB
 HEXANOLS FR HUL
 N-HEXANOL FR HUL
 CIS-HEXEN-3-AL FR HHB
 CIS-3-HEXENOL-1 4-40 FR HUL
 HISTIDINE 30-2,149 FR HUL
 HYDROCINNAMALDEHYDE FR HHB
 O-HYDROXY-ACETOPHENONE FR HHB
 P-HYDROXYBENZALDEHYDE PL PAS
 16-HYDROXYHEXADECANOIC-ACID
 FR HHB
 3-BETA-HYDROXY-5-ALPHA-PREG-16-
 EN-20-ONE SH NAP
 5-HYDROXYTRYPTAMINE FR HUL
 INDOLE-3-ACETIC-ACID RT NAP
 IODINE FR WOI
 ALPHA-IONENE FR HHB
 BETA-IONENE FR HHB
 IRON 1-800 (3,000) FR HUL
 ISOAMYLOL 7-40 FR HUL
 ISOLEUCINE 210-3,471 FR USA
 ISOPENTENYL-ADENINE RT NAP
 N(6)-ISOPENT-2-ENYL-ADENINE FL
 NAP
 ISOPENTENYL-ADENOSINE RT NAP
 ISOVALERALDEHYDE 0.006 FR HUL
 KAEMPFEROL SD NAP
 ALPHA-KETOGLUTARIC-ACID FR
 HHB
 KETOHEPTOSE FR HUL
 LACTIC-ACID FR HUL
 LANOSTEROL SD NAP
 31-NOR-LANOST-8-EN-3-BETA-OL SD
 NAP
 LEAD 0.003-60 FR AAS USG
 LEUCINE 330-5,455 FR USA
 LEUCINES 1-90 FR HUL
 LEUCIONPINE TC NAP
 LEUCIONPINE-LACTAM TC NAP
 LINALOOL FR HHB
 LINOLEIC-ACID 830-13,720 FR HUL
 USA
 ALPHA-LINOLENIC-ACID 30-496 FR
 USA
 LINOLENIC-ACID FR HUL
 LITHIUM 0.28-0.68 FR USG
 LOPHENOL SD NAP
 LUPEOL PL NAP
 LUTEIN FR HUL
 LUTEIN-EPOXIDE FR NAP
 LUTEIN-5,6-EPOXIDE FR HUL
 LYCOPENE 1-20 FR HUL WOI
 CIS-5-LYCOPENE 1-20 FR HUL WOI
 CIS-5,CIS-5'-LYCOPENE 1-20 FR HUL
 WOI
 LYCOPERSICONOL RT NAP
 LYCOPERSICONOLIDE 6.7 RT NAP
 LYCOPHYLL FR HUL
 LYCOXANTHIN FR HUL
 LYSINE 20-5,455 FR HUL USA
 MAGNESIUM 4,300 LF HUL
 MAGNESIUM 70-6,000 FR HUL USA
 USG
 MALIC-ACID FR HUL
 MANGANESE 0.6-100 FR AAS HUL
 USG
 MERCURY 0.00069-0.0017 FR USG
 METHANOL FR HUL
 METHIONINE 16-1,322 FR HUL USA
 METHYL-2-BUTYRIC-ACID FR HHB

- 4-ALPHA-METHYL-24-ETHYL-
CHOLESTA-7,24-DIEN-3-BETA-OL SD
NAP
24-METHYLENE-CYCLOARTANAL SD
NAP
24-METHYLENE-CYCLOARTENAL PL
PAS
METHYL-GLYOXAL FR HHB
METHYL-6-HEPTEN-5-ON-2 FR HHB
24-METHYL-LOPHENOL SD NAP
S-METHYL-METHIONINE 16-35 FR HUL
24-METHYL-31-NOR-LANOST-9(11)-EN-
3-BETA-OL SD NAP
METHYL-SALICYLATE FR HUL
MEVALONIC-ACID 3-4 FR NAP
MOLYBDENUM 0-6 FR USG
MYRISTIC-ACID TR FR HUL USA
NARCOTINE FR
NARINGENIN FR HUL
NEO-BETA-CAROTENE-B FR
NEO-BETA-CAROTENE-U FR
NEO-CHLOROGENIC-ACID LF NAP
NEODYMIUM 2-30 FR USG
NEOLYCOPENE-A FR
NEOLYCOPENE-B FR
NEOTIGOGENIN 300-1,500 TC NAP
NEOXANTHIN FR HUL
NESTIGOGENIN FR HHB
NEUROSPORINE FR HHB
CIS-5'-NEUROSPORENE FR NAP
NIACIN 6-99 FR USA
NICKEL 0.01-5 FR AAS USG
NICOTIANAMINE 0.05 μ M/G LF NAP
NITROGEN 1,300-23,330 FR AAS
NITROGEN 26,000 LF HUL
NONACOSANE FR HHB
ALPHA-NONALACTONE FR HHB
31-NORCYCLOARTENAL SD NAP
31-NOR-LANOST-8-EN-3-BETA-OL SD
NAP
31-NOR-LANOST-9(11)-EN-3-BETA-OL
SD NAP
OBTUSIFOLIOL SD NAP
ALPHA-OCTALACTONE FR HHB
OLEIC-ACID 310-5,124 FR HUL USA
OXALIC-ACID 36-263 FR WBB
ALPHA-OXOGLUTARIC-ACID FR HUL
PALMITIC-ACID 210-3,471 FR HUL
PALMITOLEIC-ACID 10-165 FR USA
PANTOTHENIC-ACID 1-61 FR USA
PECTIN 100-31,000 FR HUL WOI
PECTINESTERASE FR HUL
N-PENTANOL 7-40 FR HUL
PENTANOLS FR HUL
2-PENTANONE FR HUL
PENTEN-1-OL-3 FR HHB
PHENOL FR HHB
PHENYLACETALDEHYDE FR HHB
PHENYLACETONITRILE FR HHB
PHENYLALANINE 72-3,801 FR HUL
USA
PHENOLICS 27-570 FR HUL
PHENYL-2-ETHANOL FR HHB
PHOSPHATIDYL-GLYCEROL LF NAP
PHOSPHORUS 5,500 LF HUL
PHOSPHORUS 110-8,400 (-12,000) FR
HUL
PHYTOENE FR HUL
PHYTOENE-1,2-OXIDE FR NAP
PHYTOFLUENE FR HUL
PHYTOSTEROLS 70-1,157 FR USA
ALPHA-PINENE FR HUL
PIPECOLIC-ACID FR WOI
POLYGALACTURONASE FR HUL
POTASSIUM 780-58,800 (-102,000) FR
AAS HUL
POTASSIUM 47,000 LF HUL
PROLINE 170-2,810 FR USA
PROLINE 725 RT NAP
PROLINE 541 RT NAP
PROLYCOPENE FR HHB
PROPANOLS FR HUL
2-PROPANONE FR HHB
PROPIONIC-ACID FR HHB
PROTEIN 8,790-148,935 FR HUL USA
PROTOPECTIN 11,700-24,200 FR HUL
WOI
CIS-5'-BETA-PSEUDOCAROTENE FR
NAP
CIS-5'-EPSILON-PSEUDOCAROTENE FR
NAP
PYRUVIC-ACID FR HUL
QUERCETIN FR NAP
QUERCETIN-3-RHAMNOSIDE FR HUL
QUERCITRIN FR HUL
RIBOFLAVIN 1-8 FR USA
RISHITIN PL NAP
RUBIDIUM 0.3-22 FR AAS
RUTIN FR HUL
RUTIN 24,000 LF NAP
RUTINOSIDE FR HUL
SALICYLALDEHYDE FR HHB
SELENIUM 0.00069-0.034 FR USG
SERINE 57-3,967 FR HUL USA
SILICON <2 FR AAS
SILVER 0-1.4 FR USG
BETA-SITOSTEROL FR HUL
SODIUM 10-6,600 FR HUL

SOLADULCIDINE SH NAP
 SOLANINE FR HUL
 SQUALENE FR HHB
 STARCH 120-10,000 FR HUL
 STEARIC-ACID 80-1,322 FR HUL USA
 STIGMASTEROL FR HUL
 STRONTIUM 0-140 FR USG
 SUCCINIC-ACID FR HHB
 SUCROSE FR HUL
 SUGARS 15,000-45,000 FR HUL
 SULFOQUINOVOSYL-DIACYL-GLYC-
 EROL LF NAP
 SULFUR 107-2,330 FR AAS HHB USG
 SYRINGALDEHYDE PL PAS
 TARTARIC-ACID FR WOI
 TETRA-DECA-CIS-6-ENE-1,3-DIYNE-5,8-
 DIOL ST NAP
 N-TETRATRIACONTANE FR HHB
 THIAMIN 1-10 FR USA
 THREONINE 65-3,637 FR HUL USA
 TITANIUM 0-140 FR USG
 ALPHA-TOCOPHEROL 7-143 FR TOT
 TOMATIDA-3,5-DIENE SH NAP
 TOMATIDINE PL HHB
 TOMATINE FL HUL
 TOMATINE 6-8 LF WOI
 TOMATOSIDE-A SD NAP
 TRANS-METHYL-6-HEPTADIENE-3,5-
 ON-2
 TRIACONTANE FR HHB
 TRICODECAN-3-ONE TR LF NAP
 TRIDECAN-2-ONE TR LF NAP
 TRIDECAN-3-ONE TR LF NAP
 TRIGONELLINE 69 RT NAP
 TRIGONELLINE 14 RT NAP
 9,10,16-TRIHIDROXYHEXADECANOIC-
 ACID FR HHB
 9,10,18-TRIHIDROXYOCTADECANOIC-
 ACID FR HHB
 TRIMETHYL-2,6,6-HYDROXY-2-
 CYCLOHEXANONE FR HHB
 N-TRITRIACONTANE FR HHB
 TRYPTAMINE FR HUL
 TRYPTOPHAN 1-1,157 FR HUL USA
 TYRAMINE FR HUL
 TYROSINE 38-2,479 FR HUL USA
 UBIQUINONE-10 60 TC NAP
 I-VALERALDEHYDE FR HHB
 I-VALERIC-ACID FR HHB
 VALINE 1-3,801 FR HUL USA
 VANADIUM 0-6 FR USA
 VANILLIN PL PAS
 4-VINYL-GUAIACOL LF SD CRC(FSN)
 VIOLAXANTHIN FR HHB

VIT-B6 0-9 FR USA
 WATER 910,000-982,000 FR HUL
 XANTHOPHYLL FR HUL
 YTTRIUM 0-6 FR USG
 ZEAXANTHIN FR WOI
 ZEATIN FR NAP
 ZEATIN-GLUCOSIDE FL NAP
 ZEATIN-RIBOSIDE FL NAP
 ZINC 1-120 FR HUL USA USG
 ZIRCONIUM 0-4 FR USG

AAS=ACTA AGRIC SCAND SUPPL
 22:1980; H2O=94%; ZMB= 16.67 X APB

LYCOPODIUM CLAVATUM L.

“CLUBMOSS; ANTLEHERB”

N-ACETYL-N-BETA-
 METHYLPHLEGMARINE PL CCO
 O-ACETYLLYCOCLAVINE PL HHB
 ALANINE PO WOI
 ALKALOIDS 1,000-2,000 PO HHB WOI
 411/
 APIGENIN PL 411/
 ARGININE PO WOI
 ARSENIC 0.49 PL CAL 1/
 AZELAIC-ACID PL CCO
 CALCIUM 16,020 PL CAL
 CLAVANOLINE PL JSG
 CLAVATINE PL CCO
 CLAVATOL PL CCO
 CLAVATOXINE PL WOI
 CLAVOLONINE PL CCO
 COPPER 8 PL CAL
 DE-N-METHYL-ALPHA-OBSCURINE PL
 JSG
 DIEPISERRATENEDIOL ST CCO
 DIHYDROCAFFEIC-ACID PL 411/
 DIHYDROLYCOPODINE PL HHB
 9,10-DIHYDROXYSTEARIC-ACID PO
 WOI
 9,10-DIOXYSTEARIC-ACID PO CCO
 FAT 400,000-500,000 PO WOI
 FAWCETTIDINE PL CCO
 FAWCETTIMINE PL JSG
 FERULIC-ACID PL CCO
 FLABELLIFORMINE PL HHB
 9-HEXADECANOIC-ACID 120,000-
 175,000 PO WOI
 HISTIDINE PO WOI
 HYDROCAFFEIC-ACID PO WOI
 IRON 650 PL CAL
 LINOLEIC-ACID PO WOI
 LUCIDOLINE PL JSG

LYCLANINOL PL JSG
 LYCLANTIN PL JSG
 LYCOCLAVANIN ST CCO
 LYCOCLAVANOL ST CCO
 LYCOCLAVINE PL HHB
 LYCOCRYPTOL PL JSG
 LYCODINE PL CCO
 LYCODOLINE PL CCO
 LYCOPODINE 870 PL CCO HHB
 LYCOPOLINE PL CCO
 MAGNESIUM 2,340 PL CAL
 MANGANESE 100 PL CAL
 MERCURY 0.07 PL CAL
 METHYLLYCOCLAVINE PL JSG
 MYRISTIC-ACID PO WOI
 NICOTINE PO CCO
 OLEIC-ACID 165,000-300,000 PO WOI
 ALPHA-ONOCERIN PL HHB
 16-OXSERRATENEDIOL PL CCO
 16-OXSERRAT-14-ENE-
 3ALPHA,21BETA-DIOL PL JSG
 16-OXSERRAT-14-EN-3-BETA,21-
 ALPHA-DIOL PL HHB
 16-OXSERRAT-14-EN-3-BETA,21-BETA-
 DIOL PL HHB
 PALMITIC-ACID PO WOI
 POTASSIUM 18,000 PL CAL
 PROLINE PO WOI
 PROTOAMINE PO WOI
 SERRATENEDIOL ST CCO
 SERRAT-14-ENE-3ALPHA,20BETA,21,24-
 TETRAOL PL JSG
 SERRAT-14-ENE-3BETA,21BETA,24-
 TRIOL PL JSG
 SERRAT-14-ENE-3ALPHA,21BETA,24-
 TRIOL-16-ONE PL JSG
 SODIUM 155 PL CAL
 SPORONIN 200,000-450,000 PO WOI
 VALINE PO WOI
 VANILLIC-ACID PL CCO
 ZINC 28 PL CAL
 1/ CAL & CCO data may apply as well to L.
 cernuum. (CCO)

LYCOPodium serratum
THUNB.

“CLUBMOSS; HUPERZIA;
 CHIN-PU-HUAN”

21-EPISERRATENEDIOL PL CCO
 21-EPISERRATRIOL PL CCO
 HUPERZINE-A PL ABS
 HUPERZINE-B PL ABS

LYCOBERGINE PL JSG
 LYCODINE PL CCO
 LYCODOLINE PL CCO
 LYCOPODINE PL JSG
 LYCOSERRAMINE PL JSG
 LYCOSERRINE PL JSG
 LYCOTHUINE PL JSG
 16-OXOLYCOCLAVINOL PL JSG
 16-OXSERRATENTRIOL PL JSG
 SERRATANIDINE PL CCO
 SERRATENEDIOL PL CCO
 SERRAT-14-ENE-3BETA,21ALPHA-DIOL
 PL JSG
 SERRAT-14-ENE-3BETA,21BETA-DIOL
 PL JSG
 SERRAT-14-ENE-3BETA,21ALPHA,24-
 TRIOL PL JSG
 SERRATIDENE PL JSG
 SERRATINE PL CCO
 SERRATINIDINE PL CCO
 SERRATININE PL CCO
 SERRATRIOL PL CCO
 TOHOGENINOL PL JSG
 TOHOGENOL PL CCO

***LYCOPUS AMERICANUS* MUHL.**

“AMERICAN BUGLE”

EO 500 PL BML
 GERMACRENE-D 22 PL BML
 LIANLOOL 75 PL BML
 3-OCTANOL 28 PL BML
 1-OCTEN-3-OL 179 PL BML

***LYCOPUS EUROPEUS* L.**

“EUROPEAN BUGLE”

ALKALOIDS 2,400 PL HHB
 APIGENIN-7-MONOGLUCOSIDE PL HHB
 ASCORBIC-ACID PL HHB
 DELTA-CADINENE 10 PL BML
 CAFFEIC-ACID PL HHB
 CARYOPHYLLENE 125 PL BML
 CARYOPHYLLENE-OXIDE 16 PL BML
 CHLOROGENIC-ACID PL HHB
 COUMARIN 1,200 PL HHB
 ELLAGIC-ACID PL HHB
 EO 500-2,000 PL BML HHB
 TRANS-BETA-FARNESENE 85 PL BML
 FERULIC-ACID PL JLS58:156
 FLAVONIDS 23,000 PL HHB
 GALACTOSE PL HHB
 GERMACRENE-D 22 PL BML

GLUCOSE PL HHB
 LUTEOLIN-7-MONOGLUCOSIDE PL HHB
 RESIN 29,000 PL HHB
 ROSMARINIC-ACID 37,000 PL FT62:166
 SINAPIC-ACID PL HHB
 URSOLIC-ACID PL HHB

LYCOPUS UNIFLORUS MICHX.

“ONE-FLOWERED BUGLE”

DELTA-CADINENE 8 PL BML
 GAMMA-CADINENE 8 PL BML
 ELEMOL 1 PL BML
 EO 500 PL BML
 CIS-ALPHA-FARNESENE 2 PL BML
 GERMACRENE-D 8-29 PL BML
 LIMONENE 111-174 PL BML
 LINALOOL 5 PL BML
 GAMMA-MUUROLENE 24 PL BML
 MYRCENE 12-18 PL BML
 1-OCTEN-3-OL 18 PL BML
 BETA-PHELLANDRENE 107-154 PL BML
 ALPHA-PINENE 8-22 PL BML
 BETA-PINENE 7-112 PL BML
 SABINENE 3-9 PL BML
 ALPHA-SELINENENE 1 PL BML
 BETA-SELINENENE 1 PL BML
 SPATHULENOL 2 PL BML
 TERPINEN-4-OL 3 PL BML
 ALPHA-TERPINEOL 18 PL BML
 VIRIDIFLOROL 2 PL BML

LYCOPUS VIRGINICUS L.

“BUGLE”

BETA-BOURBONENE 53-132 PL BML
 DELTA-CADINENE 16-40 PL BML
 CAFFEIC-ACID PL 411/
 CAMPHENE 3-8 PL BML
 CARYOPHYLLENE 30-80 PL BML
 CHLOROGENIC-ACID PL 411/
 1,8-CINEOLE 7-18 PL BML
 ELLAGIC-ACID PL 411/
 EO 800-2,000 PL BML
 GALLIC-ACID PL BML
 GERMACRENE-D 52-130 PL BML
 CIS-ISOPULEGONE 2-4 PL BML
 LIMONENE 10-26 PL BML
 LINALOOL 20-50 PL BML
 LITHOSPERMIC-ACID PL ABS
 LYCOPIN PL ABS
 GAMMA-MUUROLENE 5-12 PL BML
 MYRCENE 6-14 PL BML
 ALPHA-PINENE 266-666 PL BML

BETA-PINENE 199-498 PL BML
 PULEGONE 10-24 PL BML
 ROSMARINIC-ACID PL 411/
 TANNIC-ACID PL ABS
 TANNIN

LYCORIS RADIATA HERB.

“SPIDER LILY”

CHRYSANTHEMIN 400 FL CCO HHB
 CYANIDIN-3-GLUCOSIDE FL HHB
 CYANIDIN-3-SAMBUBIOSIDE FL HHB
 DEMETHYLHOMOLYCORINE BU ALK
 DEMETHYLLYCORAMINE BU CCO
 ETHYLRADIATINE BU HHB
 FRUCTANE 110,000-120,000 BU HHB
 FRUCTOSE 21,400 BU HHB
 GALANTHAMINE BU ALK
 GLUCOSE 6,900 BU HHB
 HAEMANTHAMINE BU ALK
 HAEMANTHIDINE BU HHB
 HIGANBANAMANNAN 39,000 BU HHB
 HIPPEASTRINE BU CCO
 HOMOLYCORINE BU ALK
 2-(4-HYDROXY-BENZYL)-MALIC-ACID
 FL CCO
 LYCORAMINE BU ALK
 LYCOREMINE BU ALK
 LYCORENINE BU ALK
 LYCORICYANINCHLORIDE FL HHB
 LYCORINE BU ALK
 LYCORISINE 200,200 BU HHB
 NORPLUVIINE BU ALK
 PHLORACETOPHENOTRIMETHYLETHER
 BU HHB
 PLUVIINE BU ALK
 PRETAZETTINE ST CCO
 PSEUDOLYCORINE BU ALK
 RADIATINE RH ALK
 SEKISANINE BU ALK
 SEKISANOLINE BU ALK
 SQUAMIGERINE BU HHB
 STARCH 200,000-551,000 BU HHB
 SUCROSE 73,200 BY HHB
 SUISENINE BU ALK
 TAZETTINE BU ALK
 VITTATINE PL ALK

LYCORIS SQUAMIGERA MAXIM.

“MAGIC LILY”

“RESURRECTION LILY”

EPIGALANTHAMINE BU ALK
 GALANTHAMINE BU ALK

HIPPEASTRINE BU ALK
 HOMOLYCORINE BU ALK
 LYCORAMINE BU ALK
 LYCORENINE RH ALK
 LYCORINE BU ALK
 NORPLUVIINE BU ALK
 PLUVIINE BU ALK
 PSEUDOLYCORINE BU ALK
 SQUAMIGERINE BU ALK
 TAZETTINE BU ALK
 VITTATINE BU ALK

LYGODIUM JAPONICUM
 (THUNB.) SW.

“CLIMBING FERN”

ARSENIC 1.17 PO CAL
 CALCIUM 3,060 PO CAL
 COPPER 13 PO CAL
 IRON 1,090 PO CAL
 MAGNESIUM 2,270 PO CAL
 MANGANESE 191 PO CAL
 MERCURY 0.55 PO CAL
 POTASSIUM 7,380 PO CAL
 SODIUM 104 PO CAL
 ZINC 23 PO CAL

LYTHRUM SALICARIA L.

“PURPLE LOOSESTRIFE”

ANTHOCYANINS 10,000 FL HHB
 BUTYL-PHTHALATE PL HHB
 CHLOROGENIC-ACID LF HHB
 P-COUMARIC-ACID LF HHB
 CYANIDIN-3-MONOGALACTOSIDE FL HHB
 DIBUTYL-PHTHALATE PL HHB
 DIISOBUTYL-PHTHALATE PL HHB
 ELLAGIC-ACID LF HHB
 GALLOTANNINS LF HHB
 ISOBUTYL-PHTHALATE PL HHB
 LOLIOLIDE PL HHB
 MALVIDIN-3,5-DIGLUCOSIDE FL HHB
 NARCISSIN PL HHB
 ORIENTIN LF HHB
 PECTIN LF HHB
 SALICARIN PL HHB
 BETA-SITOSTEROL PL HHB
 TANNIN 137,000 FL HHB
 TANNIN 120,000 LF HHB
 TANNIN 85,000 RT HHB
 TANNIN 105,000 ST HHB
 VITEXIN LF HHB

MACADAMIA SPP

“MACADAMIA”

ALANINE 3,290-3,385 SD USA
 ARACHIDIC-ACID 17,135-20,925 SD CRC
 ARGININE 8,990-9,250 SD USA
 ASCORBIC-ACID 0 CRC
 ASH 12,400-17,000 SD CRC USA
 ASPARTIC-ACID 8,270-8,500 SD USA
 BEHENIC-ACID 2,140-5,425 SD CRC
 CALCIUM 355-1,075 SD USA
 CARBOHYDRATES 137,300-159,000 SD CRC USA
 BETA-CAROTENE 0 SD USA
 COPPER 2-3 SD USA
 CYANIDIN PL JLS58:118
 CYSTINE 960-985 SD USA
 EICOSENOIC-ACID 15,000-24,025 SD CRC
 FAT 714,000-775,000 SD CRC USA
 FIBER 25,000-67,150 SD CRC USA
 GADOLEIC-ACID 10,470-10,770 SD USA
 GLUTAMIC-ACID 17,820-18,330 SD USA
 GLYCINE 3,710-3,815 SD USA
 HISTIDINE 1,680-1,730 SD USA
 IRON 18-200 SD CRC USA
 ISOLEUCINE 2,440-2,510 SD USA
 KILOCALORIES 6,910-7,220 SD CRC USA
 LAURIC-ACID 715-10,850 SD NUT
 LEUCINE 4,620-4,750 SD USA
 LINOLEIC-ACID 10,710-14,725 SD CRC USA
 LYSINE 3,240-3,330 SD USA
 MAGNESIUM 1,160-1,190 SD USA
 METHIONINE 920-950 SD USA
 MUFA 581,710-598,340 SD USA
 MYRISTIC-ACID 4,680-6,200 SD NUT USA
 NIACIN 13-22 SD CRC USA
 OLEIC-ACID 391,270-497,550 SD CRC USA
 PALMITIC-ACID 67,120-71,300 SD CRC USA
 PALMITOLEIC-ACID 113,385-190,650 SD CRC USA
 PHENYLALANINE 2,600-2,675 SD USA
 PHOSPHORUS 1,015-1,750 SD USA
 POTASSIUM 2,640-3,785 SD CRC USA
 PROLINE 3,960-4,075 SD USA
 PROTEIN 75,500-92,000 SD USA
 PUFA 12,710-13,075 SD USA
 RIBOFLAVIN 1 SD USA

SERINE 3,510-3,610 SD USA
 SFA 110,370-113,525 SD USA
 SODIUM 50 SD USA
 STEARIC-ACID 23,560-27,810 SD CRC
 USA
 THIAMIN 3-4 SD USA
 THREONINE 2,630-2,705 SD USA
 TYROSINE 3,370-3,465 SD USA
 VALINE 3,210-3,300 SD USA
 WATER 28,800-31,000 SD CRC USA
 ZINC 17-18 SD USA

CRC & NUT=CRC NUT HANDBOOK

**MACLEAYA CORDATA R.
 BROWN**

“PLUME POPPY”

ALLOCRYPTOPINE PL 91/
 BERBERINE PL 91/
 BOCCONINE PL 91/
 BOCCONOLINE PL 91/
 CHELILUTINE PL 91/
 CHELIRUBINE PL 91/
 COPTISINE PL 91/
 CRYPTOPINE PL 91/
 DEHYDROCHEILANTHIFOLINE PL JSG
 ETHOXYCHELERYTHRINE PL DAA
 ETHOXSANGUINARINE PL DAA
 HELERITRINE PL 91/
 HOMOCHLIDONINE PL DAA
 MACARPINE PL 91/
 OXSANGUINARINE PL 91/
 PROTOPINE PL 91/
 PROTOPINE-N-OXIDE PL JSG
 SANGUINARINE LF CCO

MAGNOLIA DENUDATA Desr.

“XIN-YI; HSIN-I”

ARSENIC 0.55 FL CAL 1/
 BORNYL-ACETATE BK BU FL LF TW
 CCO
 BETA-BOURBONENE BK BU FL LF TW
 CCO
 BURCHELLIN LF CCO
 DELTA-CADINENE BK BU FL LF TW
 CCO
 CALAMENENE BU LF CCO
 CALCIUM 8,040 FL CAL
 CAMPHENE BK BU FL LF TW CCO
 BETA-CARYOPHYLLENE BK BU FL LF
 TW CCO

CARYOPHYLLENE-OXIDE BK BU FL
 LF TW CCO
 CINEOLE FL CCO
 1,8-CINEOLE BK BU FL LF TW CCO
 CITRONELLYL-ACETATE BK BU FL LF
 TW CCO
 ALPHA-COPAENE BK BU FL LF TW
 CCO
 COPPER 16 FL CAL
 CYANIDIN PL JLS58:123
 CYANIDIN-GLYCOSIDE FL FR HHB
 P-CYMENE BK BU FL LF TW CCO
 P-CYMEN-8-OL BU FL LF CCO
 DENUDATIN-A LF CCO
 DENUDATIN-B LF CCO
 DENUDATONE LF CCO
 BETA-ELEMENE BK BU FL LF TW CCO
 ELEMOL BK BU FL LF TW CCO
 BETA-EUDESOL BK BU FL LF TW
 CCO
 FUTOENONE LF CCO
 GERANYL-ACETATE BK BU FL LF TW
 CCO
 GERMACRENE-D BK BU FL LF TW
 CCO
 N-HEXANOL LF CCO
 CIS-3-HEXEN-1-OL BK BD FL LF CCO
 ALPHA-HUMULENE BK BU FL LF TW
 CCO
 IRON 320 FL CAL
 KAEMPFEROL PL JLS58:123
 LEUCOCYANIDIN LF HHB
 LIMONENE BK BU FL LF TW CCO
 L-LINALOOL BK BU FL LF TW CCO
 L-MAGNOCURARINE BK HHB
 MAGNOFLORIN RT HHB
 METHYL-CHAVICOL FL CCO
 MAGNESIUM 2,120 FL CAL
 MANGANESE 42 FL CAL
 MERCURY 0.14 FL CAL
 ALPHA-MUUROLENE BU FL LF TW
 CCO
 GAMMA-MUUROLENE BU FL LF TW
 CCO
 MYRCENE BK BU FL LF TW CCO
 D-TRANS-NEROLIDOL BK BU FL LF
 TW CCO
 NERYL-ACETATE BK BU FL LF TW
 CCO
 N-NONADECANE (3.7% EO) FL CCO
 PAEONIDIN-GLYCOSIDE FL FR HHB
 N-PENTADECANE (89.2% EO) FL CCO
 ALPHA-PINENE BK BU FL LF TW CCO
 BETA-PINENE BK BU FL LF TW CCO

PINITOL BK HHB
 POTASSIUM 9,780 FL CAL
 QUERCETIN PL JLS58:123
 RUTIN FL HHB
 SABINENE BK BU FL LF TW CCO
 SALICIFOLIN BK HHB
 BETA-SELINENE BU FL LF TW CCO
 SODIUM 71 FL CAL
 1-TERPINEN-4-OL BK BU FL LF TW
 CCO
 ALPHA-TERPINENE BK BU LF TW CCO
 GAMMA-TERPINENE BK LF CCO
 ALPHA-TERPINEOL BK BU FL LF TW
 CCO
 D-VERAGUENSIN LF CCO
 ZINC 25 FL CAL

1/CAL did not specify species; mineral data
 may apply to other spp

MAGNOLIA FARGESII Cheng

“XIN-YI; HSIN-I”

ARSENIC 0.55 FL CAL 1/
 CALCIUM 8,040 FL CAL
 CAMPHOR FL CCO
 CINEOLE FL CCO
 CITRAL FL CCO
 COCLAURINE FL CCO
 COPPER 16 FL CAL
 EUDESMIN FL CCO
 FARGESIN FL CCO
 IRON 320 FL CAL
 LIMONENE FL CCO
 LINALOOL FL CCO
 LIRIORESINOL-B-DIMETHYL-ETHER
 FL CCO
 MAGNOLIN FL CCO
 METHYL-CHAVICOL FL CCO
 MAGNESIUM 2,120 FL CAL
 MANGANESE 42 FL CAL
 MERCURY 0.14 FL CAL
 ALPHA-PINENE FL CCO
 PINORESINOLDIMETHYL-ETHER FL
 CCO
 POTASSIUM 9,780 FL CAL
 SODIUM 71 FL CAL
 ZINC 25 FL CAL

MAGNOLIA KOBUS DC

“XIN-YI; HSIN-I”

ANETHOLE (16% EO) FL HHB
 ARSENIC 0.55 FL CAL 1/

CAFFEIC-ACID PL JLS58:123
 CALCIUM 8,040 FL CAL
 CAMPESTEROL SD HHB
 CAMPHOR FL CCO
 CAPRIC-ACID FL CCO
 CINEOLE FL CCO
 CITRAL (15% EO) FL CCO HHB
 COPPER 16 FL CAL
 CYANIDIN-GLYCOSIDE FL FR HHB
 EUGENOL FL CCO
 16-HENTRIACONTANOL SD HHB
 16-HENTRIACONTANONE SD HHB
 IRON 320 FL CAL
 KAEMPFEROL PL JLS58:123
 KOBUSININ-A PL JSG
 KOBUSININ-B PL JSG
 MAGNOSALIN FL CCO
 METHYL-CHAVICOL FL CCO
 MAGNESIUM 2,120 FL CAL
 MANGANESE 42 FL CAL
 MERCURY 0.14 FL CAL
 OLEIC-ACID FL CCO
 PAEONIDIN-GLYCOSIDE FL FR HHB
 ALPHA-PINENE FL CCO
 PINITOL LF HHB
 POTASSIUM 9,780 FL CAL
 QUERCETIN PL JLS58:123
 RUTIN 500 FL HHB
 SALICIFOLIN 1,800 BK HHB
 BETA-SITOSTEROL SD HHB
 SODIUM 71 FL CAL
 STIGMASTEROL SD HHB
 SYRINGIN BK HHB
 ZINC 25 FL CAL

MAGNOLIA OFFICINALIS

Rehd. & Wils.

“CHINESE MAGNOLIA; HOU PU”

ANONAIN PL CCO
 BORNYL-ACETATE EO CCO
 BORNLYMAGNOLIOL PL JSG
 CAFFEIC-ACID PL JLS58:123
 CALCIUM 6,350 BK SMO
 CAMPHENE EO CCO
 CARYOPHYLLENE-EPOXIDE EO CCO
 COPPER 8 BK SMO
 CRYPTOMERIDIOL EO CCO
 CYANIDIN PL JLS58:123
 EO 3,000-10,000 BK CCO HHB
 EUDESMOLS 2,820-2,940 BK HHB
 ALPHA-EUDESMOL EO CCO
 BETA-EUDESMOL EO CCO

HONOKIOL PL CCO
 IRON 120 BK SMO
 KAEMPFEROL PL JLS58:123
 LIRIODENINE PL CCO
 MAGNESIUM 690 BK SMO
 MAGNOCURARINE PL CCO
 MAGNOFLORINE PL CCO
 MAGNOLOL BK HHB
 MANGANESE 120 BK SMO
 MICHELARBINE PL CCO
 ALPHA-PINENE PL CCO
 BETA-PINENE PL CCO
 POTASSIUM 2,560 BK SMO
 QUERCETIN PL JLS58:123
 SALICIFOLINE PL CCO
 SODIUM 27 BK SMO
 ZINC 9 BK SMO

1/Hsu (in CCO) says that *Magnoliae Cortex*
 is *Magnolia officinalis* in China, *Magnolia*
obovata in Japan

**MAHONIA AQUIFOLIA (LINDL.)
 DON**

"OREGON GRAPE"

BERBAMINE RT ALK
 BERBERINE RT ALK
 CANADINE PL CRC
 COLUMBAMINE PL JSG
 CORYDINE PL JSG
 CORYPALMINE PL CRC
 CORYTUBERINE PL JSG
 HYDRASTINE RT ALK
 ISOBOLDINE PL JSG
 ISOCORYDINE PL CRC
 JATRORRHIZINE PL JSG
 MAGNOFLORINE PL JSG
 MAHONINE PL CRC
 OXYACANTHINE RT ALK
 PALMATINE PL JSG
 RESIN PL CRC
 TANNIN PL CRC
 TETRAHYDROBERBERINE PL JSG
 TETRAHYDROJATRORRHIZINE PL JSG

MALPIGHIA GLABRA L.

"ACEROLA"

ASCORBIC-ACID 16,228-172,231 FR USA
 ASH 2,000-42,000 FR PED USA
 CALCIUM 120-1,400 FR PED USA
 CARBOHYDRATES 778,000 FR PED

BETA-CAROTENE 3-69 FR PED USA
 FAT 3,000-34,924 FR USA
 FIBER 4,000-46,566 (-121,000) FR USA
 (PED)
 IRON 2-28 FR PED USA
 KILOCALORIES 320-3,725 FR USA
 MAGNESIUM 180-2,095 FR USA
 NIACIN 4-47 FR USA
 PANTOTHENIC-ACID 3-36 FR USA
 PHOSPHORUS 110-1,280 FR USA
 POTASSIUM 828-24,345 FR USA
 PROTEIN 4,000-46,566 FR USA
 RIBOFLAVIN 0.6-7 FR USA
 SODIUM 35-1,219 FR USA
 THIAMIN 0.2-2.3 (-11) FR USA (PED)
 VIT-B6 0.09-1.04 FR USA
 WATER 914,000-923,000 FR PED USA

1/PED=Pedersen, M. 1987.

MALUS DOMESTICA BORKH.

"APPLE"

ABSCISIC-ACID FR NAP
 CIS-2,TRANS-4-ABSCISIC-ACID BK NAP
 TRANS-ABSCISIC-ACID FR NAP
 ACETIC-ACID
 ACETIC-ACID-AMYL-ESTER
 ACETALDEHYDE
 ACETONE
 N-ALPHA-ACETYL-AGGININE SH NAP
 ADENINE RT NAP
 ALPHA-ALANINE FR
 BETA-ALANINE FR
 ALANINE 70-435 FR USA
 ALUMINUM 0.4-129 FR AAS USG
 ALPHA-AMINOBUTYRIC-ACID
 AMMONIA(NH₃) 235-1,029 EP(FR)
 AMYGDALIN 6,000-13,800 SD
 AMYL-ACETATE
 AMYL-BUTYRATE
 AMYL-PROPIONATE
 ANILINE 1.7 EP(FR) NAP
 ANILINE 1.5 FR NAP
 ARABINOSE
 ARGININE 60-373 FR USA
 ARSENIC 0.00055-0.43 FR AAS USG
 ASCORBIC-ACID 20-402 FR USA
 ASCORBIDASE
 ASH 2,300-43,000 FR AAS USG
 ASPARAGINE 171 FR
 ASPARTIC-ACID 210-2,115 FR USA
 AVICULARIN FR NAP
 BARIUM 0.22-8.6 FR USG

- BENZOIC-ACID
 3,4-BENZOPYRENE FR NAP
 BENZYL-ACETATE
 BENZYL-AMINE 0.6 EP(FR) NAP
 BENZYLAMINE 0.3-3.0 FR NAP
 BIOTIN
 BORON 1-110 FR AAS BOB USG
 BROMINE <1 FR AAS
 BUTANOL
 N-BUTANOL
 1-BUTANOL
 2-BUTANOL
 BUTYL-ACETATE
 BUTYL-BUTYRATE
 BUTYL-CAPROATE
 BUTYL-PROPIONATE
 BUTYL-VALERIANATE
 I-BUTYL-OCTANOATE
 I-BUTYL-PROPIOANTE
 N-BUTYL-DECANOATE
 N-BUTYL-FORMATE
 N-BUTYL-N-HEXANOATE
 N-BUTYL-OCTANOATE
 N-BUTYL-PROPIONATE
 CADMIUM <0.002-0.0258 FR AAS USG
 CAFFEETANNIN
 CAFFEIC-ACID 85-1,270 FR CRC(FSN)
 CALCIUM 43-570 (-1,376) FR AAS USG
 CALCIUM-OXALATE
 CAPROALDEHYDE
 CAPROIC-ACID-AMYL-ESTER
 CAPRYLIC-ESTER
 CARBOHYDRATE 152,250-948,550 FR
 BETA-CAROTENE 0-76 FR
 CAROTENOIDS 0-126
 CATALASE
 D-CATECHIN FR NAP
 CHLOROGENIC-ACID FR NAP
 CHLOROPHYLL 0-1 FR
 CHROMIUM 0.005-0.3 FR AAS USG
 CITRIC-ACID
 CITRAMALIC-ACID
 COBALT <0.005-0.043 FR AAS USG
 COPPER 0.24-4 FR AAS USG
 COUMARIC-ACID
 P-COUMARIC-ACID 15-460 FR
 CRC(FSN)
 N-COUMARYL-QUINIC-ACID
 P-COUMARYL-QUINIC-ACID FR NAP
 CREATINE SH NAP
 CUTIN EP(FR) NAP
 CYANIDIN LF NAP
 CYANIDIN-3-ARABINOSIDE
 CYANIDIN-7-ARABINOSIDE
 CYANIDIN-3,5-DIGLUCOSIDE CY NAP
 CYANIDIN-3-GALACTOSIDE
 CYSTINE 30-187
 I-DECANOIC-ACID
 N-DECANOL
 DECENOIC-ACID
 1-DECYL-ACETATE
 DEHYDROASCORBIC-ACID
 DIASTASE
 DIETHYLAMINE 3 FR NAP
 DIGALACTOSYL-DIGLYCERIDE 49-107
 FR
 3-BETA-19-ALPHA-DIHYDROXY-2-OXO-
 URS-12-EN-28-OIC-ACID 1,000 WD NAP
 DIHYDROXYTRICARBALLYLIC-ACID
 1 FR
 DIPHOSPHATIDYL-GLYCEROL 4-6 FR
 EO 25-35 FR
 L-EPICATECHIN FR NAP
 5,6-EPOXY-10'-APO-5,6-DIHYDRO-BETA-
 CAROTENE-3,10'-DIOL 20,000
 EP(FR) NAP
 ESTRAGOLE TR EO
 ESTRONE 0.10-0.13 SD NAP
 ETHANOL
 ETHYL-ACETATE
 ETHYLAMINE 3 FR NAP
 ETHYL-BUTYRATE
 ETHYL-CAPROATE
 ETHYL-CROTONATE
 ETHYL-DECENOATE
 ETHYL-DODECANOATE
 ETHYL-HEXANOATE
 ETHYL-ISOBUTYRATE
 ETHYL-METHYLBUTYRATE
 ETHYL-NONANOATE
 ETHYL-OCTANOATE
 ETHYL-PENTANOATE
 ETHYL-PHENACETATE
 ETHYL-PROPIONATE
 ETHYL-VALERIANATE
 FARNESENE EP(FR) NAP
 FAT 3,210-34,200 FR FNF PED
 FAT 180,000-230,000 SD
 FERULIC-ACID 4-95 FR CRC(FSN)
 FIBER 131,000 FR PED
 FIBER 5,200-49,636 FR USA
 FLUORINE <0.1-2.1 FR AAS
 FOLACIN 0.02-0.2 FR USA
 FORMIC-ACID
 FRUCTOSE 50,100-60,800 FR
 FUMARIC-ACID
 GALACTANASE
 GALACTARIC-ACID

D-GALACTURONIC-ACID 13-54
 GERANIOL
 D-GLUCITOL
 GLUCOCEREBROSIDE 34-49
 D-GLUCONIC-ACID
 GLUCOSE 17,200-18,200 FR
 GLUTAMIC-ACID 156-1,244 FR
 GLUTAMINE 20
 GLYCERIC-ACID
 GLYCINE 80-497
 GLYCOLIC-ACID
 GLYOXYLIC-ACID
 GUANIDINE SH NAP
 GUANIDINOACETIC-ACID SH NAP
 GAMMA-GUANIDINOBUTRAMIDE SH
 NAP
 GAMMA-GUANIDINOBUTYRIC-ACID
 SH NAP
 GAMMA-GUANIDINOPROPIONIC-ACID
 SH NAP
 GUANIDINOSUCCINIC-ACID SH NAP
 HEMICELLULOSE
 HEPTACOSANE
 N-HEPTANOIC-ACID
 HEPTENOIC-ACID
 2-HEPTANOL
 N-HEPTANOL
 N-HEX-1-EN-3-OL
 CIS-N-HEX-3-EN-1-OL
 TRANS-N-HEX-2-EN-1-OL
 TRANS-N-HEX-3-EN-1-OL
 HEXACOSANOL
 N-HEXANOL
 7-HEXANOIC-ACID
 1-HEXANOIC-ACID
 HEXANOL
 2-HEXENAL
 TRANS-2-HEXENOIC-ACID
 HEXYL-ACETATE
 HEXYL-BUTYRATE
 HEXYL-FORMATE
 N-HEHYL-N-HEXANOATE
 N-HEXYL-OCTANOATE
 N-HEXYL-PROPIONATE
 HISTIDINE 30-187 FR
 P-HYDROXYBENZOIC-ACID FR NAP
 HYDROXYCINNAMIC-ACID 1,340 FR
 4-HYDROXYMETHYLPROLINE
 3-HYDROXY-OCTYL-BETA-D-GLU-
 COSIDE FR NAP
 19-HYDROXYURSOLIC-ACID PL JSG
 20-HYDROXYURSOLIC-ACID PL JSG
 19-HYDROXYURSONIC-ACID PL JSG
 HYPERIN
 HYPEROSIDE FR NAP
 IDAEIN
 INDOLE-3-ACETIC-ACID PL PAS
 INOSITOL
 IODINE
 IRON 1.1-123 FR AAS USA USG
 ISOAMYL-BUTYRATE
 ISOAMYL-PROPIONATE
 ISOBUTYL-ACETATE
 ISOBUTYL-BUTYRATE
 ISOBUTYL-FORMATE
 ISOCHLOROGENIC-ACID PL PAS
 ISOCITRIC-ACID
 ISOLEUCINE 50-497 FR
 ISOPROPYL-BUTYRATE
 ISOQUERCITRIN FR NAP
 JASMONIC-ACID FR NAP
 KILOCALORIES 3,419 FR PED
 LACTIC-ACID
 LAURIC-ACID 10-63 FR
 LEAD 0.002-64 FR AAS USG
 LECITHIN
 LEUCINE 120-746 FR
 LINOLENIC-ACID 870-5,411 FR
 ALPHA-LINOLENIC-ACID 180-1,120 FR
 LITHIUM 0.044-0.172 FR USG
 LUTEIN 0.4-5 FR JAF37:657
 LUTEOXANTHIN FR NAP
 LYSINE 20-746 FR
 MAGNESIUM 48-478 (-860) FR AAS USA
 USG
 L-MALIC-ACID
 MALVIDIN-MONOGLYCOSIDE
 MANGANESE 0-29 FR AAS USG
 MANNOSE
 MERCURY 0.00011-0.02 FR AAS USG
 METHANOL
 METHIONINE 20-124
 METHYL-ACETATE
 METHYL-2-XI-ACETOXY-20-BETA-
 HYDROXY-URSONATE EP(FR)
 METHYLAMINE 4.5 EP(FR) NAP
 2-METHYL-BUT-2-EN-1-AL FR NAP
 2-METHYL-BUT-3-EN-1-OL FR NAP
 D-2-METHYLBUTAN-1-OL
 2-METHYLBUTAN-2-OL
 METHYL-BUTYRATE
 METHYL-CAPROATE
 2-METHYL-2,3-EPOXY-PENTANE FR
 NAP
 24-METHYLENE-CHOLESTEROL PO
 NAP
 METHYL-FORMATE
 METHYL-GUANIDINE SH NAP

- 6-METHYL-HEPTEN-5-EN-2-ONE FR
 NAP
 METHYL-HEXANOATE
 N-METHYL-BETA-PHENETHYLAMINE
 1.2 FR NAP
 METHYL-PROPIONATE
 METHYL-2-METHYL-BUTYRATE
 METHYL-1-PENTANOATE
 METHYL-N-PENTANOATE
 2-METHYLPENTAN-2-OL
 N-METHYL-PHENETHYLAMINE 1.3
 EX(FR) NAP
 N-METHYL-PHENETHYLAMINE 1.2 FR
 NAP
 GAMMA-METHYL-PROLINE
 2-METHYL-PROPEN-1-AL FR NAP
 METHYL-VINYL-KETONE FR NAP
 MEVALONIC-ACID 30-36 FR
 MOLYBDENUM 0.077-0.43 FR USG
 MONOGALACTOSYL-DIGLYCERIDE
 12-42
 1-MONO-LINOLEIN SD NAP
 MUFA 150-935 FR USA
 MYOINOSITOL 4,500 PO NAP
 MYRISTIC-ACID 20-124 FR
 NEOCHLOROGENIC-ACID
 NEOXANTHIN EP(FR) NAP
 NIACIN 1-7 FR
 NICKEL 0.004-0.645 FR AAS USG
 NITROGEN 280-4,000 FR AAS
 NONACOSANE
 D-L-NONACOSANOL
 N-NONANOIC-ACID
 N-NONANOL-2-NONANOL
 NONENOIC-ACID
 1-NONYL-ACETATE
 OCTACOSANOL
 OCTA-CIS-3-CIS-5-DIEN-1-OL EO NAP
 OCTA-TRANS-3-CIS-5-DIEN-1-OL EO
 NAP
 OCTA-CIS-3-CIS-5-DIEN-1-OL-ACETATE
 EO NAP
 OCTA-TRANS-3-CIS-5-DIEN-1-OL-
 ACETATE EO NAP
 N-OCTANONE
 N-OCTANOL-2-OCTANOL
 OCTENOIC-ACID
 1-OCTYL-ACETATE
 OLEIC-ACID 140-871 FR
 OXALIC-ACID
 OXALOACETIC-ACID
 ALPHA-OXOGLUTARIC-ACID
 PALMITIC-ACID 480-2,986 FR
 PALMITOLEIC-ACID 10-62 FR
 PANTOTHENIC-ACID 1-4 FR USA
 PECTASE
 PECTIN 1,400-66,585 FR USA
 PECTIN-DEMETHOXYXYLASE
 N-PENTANOIC-ACID
 1-PENTANOIC-ACID
 PENTANOL
 1-PENTANOL
 2-PENTANOL
 3-PENTANOL
 N-PENTENOIC-ACID
 N-PENTYL-AMINE 0.3 FR NAP
 PENTYL-BUTYRATE
 N-PENTYL-DECANOATE
 N-PENTYL-FORMATE
 1-PENTYL-FORMATE
 PENTYL-HEXANOATE
 N-PENTYL-2-METHYLBUTYRATE
 1-PENTYL-1-PENTANOATE
 N-PENTYL-OCTANOATE
 PEROXIDASE
 2-PHENETHYLACETATE
 PHENOLICS 1,100-3,400
 PHENYLALANINE 50-311 FR
 PHLORETAMIDE FR NAP
 PHLORETIN LF JAD
 PHLORETIN-4'-O-BETA-D-
 GLUCOPYRANOSIDE 6,486 FR NAP
 PHLORETIN-XYLOGLUCOSIDE FR NAP
 PHLORIZIN GLYCOSURIC
 PHOSPHATIDYLIC-ACID 3-6 FR
 PHOSPHATIDYL-CHOLINE 189-214 FR
 PHOSPHATIDYL-ETHANOLAMINE
 101-124 FR
 PHOSPHATIDYL-GLYCEROL 8-27 FR
 PHOSPHATIDYL-INOSITOL 53-59 FR
 PHOSPHATIDYL-SERINE 4 FR
 PHOSPHORUS 68-925 (-1,548) FR AAS
 PED USG
 PHYTOSTEROLS 120-745 FR USA
 PIPECOLINIC-ACID
 POLYGALACTOSYL-DIGLYCERIDE
 POLYGALACTURONASE
 POLYPHENOLASE
 POMOLIC-ACID PL JSG
 POMONIC-ACID PL JSG
 POTASSIUM 1,110-12,140 (-17,630) FR
 AAS USG
 PROCYANIDINS LF NAP
 PROLINE 20-435
 PROPANOL
 2-PROPANOL
 N-PROPANOL
 I-PROPANOL

N-PROPIONIC-ACID
 PROPYL-ACETATE
 PROPYL-BUTYRATE
 PROPYL-FORMATE
 PROPYL-2-METHYLBUTYRATE
 PROPYL-N-PENTANOATE
 PROPYL-PROPIONATE
 PROTEIN 1,870-12,800 FR PED
 PROTOCATECHUIC-ACID FR NAP
 PUFA 1,050-6,535 FR USA
 PYRROLIDINE 1.5 EP(FR) NAP
 PYROXIDINE
 PYRUVIC-ACID
 QUERCETIN 58-263 PC PAM
 QUERCETIN-ARABINOSIDE
 QUERCETIN-3-O-ALPHA-
 ARABINOFURANOSIDE PL JSG
 QUERCETIN-3-O-ALPHA-GALACTOSIDE
 EP(FR) NAP
 QUERCETIN-3-O-BETA-D-GLUCOSIDE
 PL JSG
 QUERCETIN-3-RHAMNOGLUCOSIDE
 QUERCETIN-3-O-RHAMNOSIDE PL JSG
 QUERCETIN-3-RUTINOSIDE
 QUERCETIN-3-O-XYLOSIDE EP(FR)
 NAP
 QUERCITRIN FR NAP
 L-QUINIC-ACID
 REYNOUTRIN FR NAP
 RIBOFLAVIN 1 FR
 RUBIDIUM 0.27-10 FR AAS
 RUTIN TR EP(FR) NAP
 SELENIUM 0.000055-0.00043 FR USG
 SERINE 80-497 FR USA
 SFA 580-3,610 FR USA
 SHIKIMIC-ACID
 SILICON 1-70 FR AAS
 SILVER 0.011-0.086 FR USG
 SINAPIC-ACID FR NAP
 SODIUM 0-133 FR USG
 SORBITOL LF NAP
 STEARIC-ACID 70-435 FR
 STRONTIUM 0.165-8.6 FR USG
 SUCCINIC-ACID
 SUCROSE 24,000-36,200 FR
 SUGAR 60,100-166,000 FR
 SULFUR 1.65-23 FR USG
 TETRADECENYL-ACETATE LF NAP
 TETRADECYL-ACETATE LF NAP
 THIAMIN 1-2 FR PED
 THREONINE 30-435 FR
 TITANIUM 0.055-3 FR USG
 ALPHA-TOCOPHEROL 2-37 FR TOT
 USA

TRIACONTANOL
 TRIGLYCERIDE 45-50
 1,3,3,-TRIMETHYLDIOXA-2,7-
 BICYCLO(2,2,1)HEPTANE FR NAP
 TRYPTOPHAN 20-124 FR
 TYROSINE 40-249 FR
 URONIC-ACID 7-1,440 FR
 URSOLIC-ACID EP(FR) NAP
 VALINE 40-560 FR
 VIT-B6 1-3 FR
 VOMIFOLIOL-1-O-BETA-D-
 XYLOPYRANOSYL-6-O-BETA-D-
 GLUCOPYRANOSIDE FR NAP
 WATER 809,000-896,000 FR USG
 XYLOSE
 ZINC 0-35 FR AAS USG
 ZIRCONIUM 0.22-0.86 FR USG

Many entries derived from Hulme
 AAS=ACTA AGRIC SCAND SUPPL
 22:1980 H20=86%; ZMB =7.14 X APB

MALVA NEGLECTA WALLR.

"COMMON MALLOW"
 "CHEESES"

ARABINOSE PL CRC
 ASCORBIC-ACID 1,175 LF CRC
 ASH 172,500-174,500 PL CRC
 CHOLINE PL HHB
 FAT 70,000-152,000 SD CRC
 NITROGEN 4,100-4,200 PL CRC
 OCTACOSANE PL CRC
 PROTEIN 210,000 SD CRC
 TANNIN FL CRC

MALVA PARVIFLORA L.

"CHEESEWEED"

ASCORBIC-ACID 454-4,745 PL CRC WOI
 ASH 23,000-168,000 PL CRC WOI
 CALCIUM 3,120-23,650 PL CRC WOI
 CARBOHYDRATES 64,000-467,000 LF
 CRC
 CAROTENE 25 PL WOI
 FAT 2,000-15,000 LF CRC
 FAT 130,000-180,000 SD CRC WOI
 FIBER 15,000-109,000 LF CRC
 IRON 195 PL WOI
 KILOCALORIES 360-2,630 PL CRC
 MALVALIC-ACID PL WOI
 NIACIN 9 PL WOI
 NITROGEN 9,400- PL WOI
 PHOSPHORUS 670-4,891 PL CRC WOI

PROTEIN 48,000-350,000 LF CRC
 PROTEIN 190,000-304,000 SD CRC
 RIBOFLAVIN 2 PL WOI
 THIAMIN 1 PL WOI
 WATER 859,000-863,000 PL CRC WOI

MALVA SYLVESTRIS L.

“HIGH MALLOW”

L-ARABINOSE PL HHB
 ASCORBIC-ACID 240-2,855 LF CRC
 ASH 13,000-155,000 LF CRC WOI
 BETA-CAROTENE 33-390 LF CRCWOI
 CALCIUM 900-10,715 LF CRC WOI
 CARBOHYDRATES 21,000-250,000 LF
 CRC
 FAT 14,000- LF CRC
 FAT 97,000-167,000 SD CRC
 FIBER 9,000-107,000 LF CRC
 D-GALACTOSE PL HHB
 GALACTURONIC-ACID PL HHB
 GOSSYPIN-3-SULFATE PL JSG
 HYPOLETIN-8-O-BETA-D-GLUCOSIDE-
 3'-SULFATE PL JSG
 IRON 37-440 LF CRC WOI
 KILOCALORIES 280-3,330 LF CRC
 MALVIDIN PL HHB
 MALVIN PL HHB
 MUCILAGE PL HHB
 NIACIN 4-60 LF CRC WOI
 NITROGEN 3.300 LF WOI
 PHOSPHORUS 360-5,000 LF CRC WOI
 PROTEIN 36,000-429,000 LF CRC
 PROTEIN 190,000-198,000 SD CRC
 L-RHAMNOSE PL HHB
 RIBOFLAVIN 2-35 LF CRC WOI
 THIAMIN 1-20 LF CRC WOI
 WATER 920,000 LF WOI

MANDRAGORA OFFICINARUM L.

“MANDRAKE”

ALKALOIDS 3,000-4,000 RT CRC HHB
 APOATROPINE RT ALK
 ATROPINE 10-20 RT ALK CRC
 BELLADONNINE RT ALK
 CHRYSATROPIC-ACID PL HHB
 CUSCOHYGRINE RT ALK
 3,6-DITIGLOYLOXYTROPANE RT HHB
 FAT 226,000 SD CRC
 HYOSCYAMINE 2,500-3,500 RT ALK
 CRC
 MANDRAGORINE RT ALK

NORHYOSCYAMINE PL ALK
 PROTEIN 221,000 SD CRC
 SCOPINE RT ALK
 SCOPOLAMINE 30-50 RT ALK CRC
 SCOPOLETIN PL HHB
 SCOPOLINE PL HHB
 3-ALPHA-TIGLOYLOXYTROPANE PL
 HHB
 TROPIC-ACID PL HHB

MANGIFERA INDICA L.

“MANGO”

ALANINE 510-5,650 FR USA EFN26:71
 AMBOLIC-ACID PL JSG
 AMBONIC-ACID PL JSG
 ARGININE 190-3,400 FR USA EFN26:71
 ASCORBIC-ACID 30-1,760 FR USA WOI
 ASCORBIC-ACID 530-2,430 LF WOI
 ASH 4,700-29,140 FR USA
 ASH 19,000-133,000 LF WOI
 ASH 36,600 SD WOI
 ASPARTIC-ACID 420-4,100 FR USA
 EFN26:71
 BORON 0.5-17.5 FR BOB JFS51:523
 CALCIUM 92-1,400 FR USA JFS51:523
 CALCIUM 290-29,300 LF WOI
 CARBOHYDRATES 170,000-929,390 FR
 USA
 CARBOHYDRATES 165,000-540,000 LF
 WOI
 CARBONATE 900 SD WOI
 BETA-CAROTENE 11-96 FR WOI
 BETA-CAROTENE 6-44 LF CRC USA
 CAROTENOIDS 10-165 FR WOI
 CATALASE FR WOI
 CHLORINE 205 FR WOI
 CITRIC-ACID FR WOI
 COPPER 1.1-16.6 FR USA JFS51:523
 P-COUMARIC-ACID PL JLS58:137
 CYSTINE 70-350 FR EFN26:71
 DIPENTENE FL WOI
 EO 400 FL WOI
 FAT 1,000-16,890 FR USA WOI
 FAT 4,000-38,000 LF WOI
 FAT 107,000 SD WOI
 FIBER 8,000-49,000 FR USA
 FIBER 16,000-211,000 LF WOI
 FRUCTOSE 25,700-48,300 FR WOI
 FURFUROL 18,000 RE WOI
 GABA FR WOI
 GALLIC-ACID 90,000 FL WOI
 GALLOTANNIC-ACID 150,000 FL WOI

GERANIOL FL WOI
 GLUCOSE 10,000-43,200 FR WOI
 GLUTAMIC-ACID 600-6,800 FR USA
 EFN26:71
 GLYCINE 210-1,900 FR USA EFN26:71
 HISTIDINE 120-1,200 FR USA EFN26:71
 IODINE 0.016 FR WOI
 IRON 1-243 FR USA WOI JFS51:523
 IRON 62 LF WOI
 ISOLEUCINE 180-2,000 FR USA
 EFN26:71
 ISOMANGIFEROIC-ACID PL JSG
 KAEMPFEROL PL JLS58:137
 KILOCALORIES 590-3,554 FR CRC USA
 EFN26:71
 LAURIC-ACID 10-55 FR USA
 LEUCINE 310-2,950 FR USA EFN26:71
 LIMONENE FL WOI
 LINOLEIC-ACID 140-765 FR USA
 LINOLENIC-ACID 370-2,023 FR USA
 LYSINE 410-3,200 FR USA EFN26:71
 MAGNESIUM 84-875 FR USA JFS51:523
 MALIC-ACID 6,700-36,600 FR WOI
 MANGANESE 0.2-12.2 FR USA JFS51:523
 MANGIFERIC-ACID FR WOI
 MANGIFERINE FR WOI
 MANGIFEROL BK WOI
 MANGIFEROIC-ACID PL JSG
 MANGIFERONIC-ACID PL JSG
 METHIONINE 50-550 FR USA EFN26:71
 MUFA 1,010-5,522 FR USA
 MYRISTIC-ACID 90-492 FR USA
 NEO-BETA-CAROTENE-B 19.2 FR WOI
 NEO-BETA-CAROTENE-U 7.3 FR WOI
 NEOXANTHOPHYLL FR WOI
 NEROL FL WOI
 NERYL-ACETATE FL WOI
 NIACIN 6.5-63 FR USA WOI
 NIACIN 22-100 LF WOI
 2-OCTENE FL WOI
 OLEIC-ACID 540-2,950 FR USA
 OXALIC-ACID 300 FR WBB
 PALMITIC-ACID 520-2,843 FR USA
 PALMITOLEIC-ACID 480-2,625 FR USA
 PANTOTHENIC-ACID 1.6-8.8 FR USA
 PEROXIDASE FR WOI
 ALPHA-PHELLANDRENE FL WOI
 PHENYLALANINE 170-3,700 FR USA
 EFN26:71
 PHOSPHORUS 103-1,050 FR USA
 JFS51:523
 PHOSPHORUS 720-3,800 LF WOI
 PHYTIN FR WOI
 ALPHA-PINENE FL WOI

BETA-PINENE FL WOI
 POTASSIUM 1,080-9,475 FR USA
 JFS51:523
 PROLINE 180-2,000 FR USA EFN26:71
 PROTEIN 5,000-60,000 FR USA EFN26:71
 PROTEIN 30,000-78,000 LF WOI
 PROTEIN 95,000 SD WOI
 PUFA 510-2,788 FR USA
 QUERCETIN PL JLS58:137
 RIBOFLAVIN 0.5-3.3 FR USA
 RIBOFLAVIN 0.6-2.7 LF WOI
 SERINE 220-3,150 FR USA EFN26:71
 SFA 660-3,608 FR USA
 SILICA 4,100 SD WOI
 SODIUM 13-143 FR USA JFS51:523
 STARCH 728,000 SD WOI
 STEARIC-ACID 30-164 FR USA
 SUCCINIC-ACID FR WOI
 SUCROSE 66,700-125,800 FR WOI
 SUGARS 112,000-205,000 FR WOI
 SUGARS 10,700 SD WOI
 SULFUR 70-615 FR WOI JFS51:523
 SULFUR 2,300 SD WOI
 TANNIN 150,000 FL WOI
 TANNIN 1,100 SD WOI
 THIAMIN 0.4-3.4 FR USA WOI
 THIAMIN 0.4-1.8 LF WOI
 THREONINE 190-2,250 FR USA
 EFN26:71
 TRYPTOPHAN 80-700 FR USA EFN26:71
 TYROSINE 100-1,600 FR USA EFN26:71
 VALINE 260-2,700 FR USA EFN26:71
 VIT-B6 1.3-7.3 FR USA
 WATER 754,300-900,000 FR USA WOI
 WATER 782,000 LF WOI
 XANTHOPHYLL 42 FR WOI
 ZINC 0.4-11.4 FR USA JFS51:523

AMINO-ACID ZMB CALCULATED
 MULTIPLYING EFN26:71 VALUES
 BY 5.

MANIHOT ESCULENTA CRANTZ

"CASSAVA, MANIOC,
 TAPIOCA, YUCA"

ALANINE 870-2,765 RT USA
 ALUMINUM 10-77 RT B&H
 ARGININE 3,140-9,970 RT USA
 ASCORBIC-ACID 800-10,000 LF B&H
 ASCORBIC-ACID 97-1,530 RT B&H USA
 ASH 27,000-135,000 LF B&H
 ASH 5,000-34,300 RT B&H USA

ASPARTIC-ACID 1,810-5,750 RT USA
 BORON 0.6-7.5 RT B&H JFS51:523
 CALCIUM 1,450-10,000 LF B&H
 CALCIUM 190-2,890 RT B&H
 CALCIUM-OXALATE 170-505 RT B&H
 CARBOHYDRATES 269,200-854,875 RT USA
 BETA-CAROTENE 14-150 RT B&H
 BETA-CAROTENE 0-0.5 RT B&H PAN
 CITRATES 2,580-11,480 RT B&H
 COPPER 1-3.8 RT B&H JFS51:523
 CYSTINE 650-2,065 RT USA
 DEHYDROASCORBIC-ACID 52-154 RT B&H
 FAT 2,000-20,000 LF B&H PAN
 FAT 1,000-12,385 RT B&H USA
 FIBER 21,000-88,600 RT B&H USA
 GLUTAMIC-ACID 4,700-14,925 RT USA
 GLYCINE 640-2,030 RT USA
 HCN 180-1,800 LF B&H
 HISTIDINE 450-1,430 RT USA
 IRON 28-1,500 LF B&H
 IRON 2-114 RT B&H USA
 ISOLEUCINE 610-1,935 RT USA
 KILOCALORIES 498-3,957 LF B&H PAN
 KILOCALORIES 1,200-3,810 RT B&H USA
 LAURIC-ACID 10-32 RT USA
 LEUCINE 900-2,860 RT USA
 LINOLEIC-ACID 440-1,400 RT USA
 LINOLENIC-ACID 230-730 RT USA
 LYSINE 1,000-3,175 RT USA
 MAGNESIUM 290-2,100 RT B&H USA
 MALATES 2,060-6,095 RT B&H
 MANGANESE 0.5-2.5 RT B&H JFS51:523
 METHIONINE 260-825 RT USA
 MUFA 1,040-3,300 RT USA
 NIACIN 15-75 LF B&H
 NIACIN 6-44 RT B&H USA
 OLEIC-ACID 1,040-3,300 RT USA
 OXALATE 150-1,420 RT B&H
 OXALIC-ACID 171 RT WBB
 PALMITIC-ACID 950-3,015 RT USA
 PHENYLALANINE 600-1,900 RT USA
 PHOSPHORUS 560-2,800 LF B&H
 PHOSPHORUS 310-2,225 RT B&H USA
 POTASSIUM 2,380-24,260 RT B&H USA
 PROLINE 760-2,415 RT USA
 PROTEIN 51,000-300,000 LF B&H
 PROTEIN 4,000-98,445 RT B&H USA
 PUFA 670-2,130 RT USA
 RIBOFLAVIN 3-15 LF B&H
 RIBOFLAVIN 0.2-3.2 RT B&H PAN USA
 SERINE 760-2,415 RT USA

SFA 1,030-3,270 RT USA
 SODIUM 62-2655 RT B&H USA
 JFS51:523
 STARCH 280,000-828,400 RT B&H
 STEARIC-ACID 70-220 RT USA
 SUCCINATES 3,430-10,150 RT B&H
 SUGARS 3,400-33,730 RT B&H
 SULFUR 54-250 RT B&H JFS51:523
 THIAMIN 2-10 LF B&T
 THIAMIN 0.3-7.1 RT B&H PAN USA
 THREONINE 650-2,065 RT USA
 TRYPTOPHAN 430-1,365 RT USA
 TYROSINE 400-1,270 RT USA
 VALINE 790-2,510 RT USA
 WATER 748,000-810,000 LF B&H
 WATER 607,000-694,250 RT B&H USA
 ZINC 4-19 RT B&H JFS51:523\

B&H data seem low, cf. USA; may be APB

MARANTA ARUNDINACEA L.

“ARROWROOT”

“BERMUDA ARROWROOT”

ASCORBIC-ACID 70-215 RT CRC
 ASH 9,000-37,000 RT CRC WOI
 CALCIUM 150-467 RT CRC
 CARBOHYDRATES 295,000-911,000 RT CRC
 BETA-CAROTENE 0 RT CRC
 FAT 1,000-6,000 RT CRC
 FIBER 19,000-61,000 RT CRC
 IRON 19-75 RT CRC
 KILOCALORIES 1,250-3,830 RT CRC
 NIACIN 5-16 RT CRC
 PHOSPHORUS 180-561 RT CRC
 PROTEIN 16,000-56,000 RT CRC WOI
 RIBOFLAVIN 0.2-0.7 RT CRC
 STARCH 250,000-695,000 RH WOI 411/
 SUGARS 21,000-63,000 RT WOI
 THIAMIN 0.8-4 RT CRC
 WATER 572,000-674,000 RT CRC

MARSDENIA REICHENBACHII

TRIANA

“CONDURANGO”

BETA-AMYRINCINNAMATE BK HHB
 CAOUTCHOUC 60,000 LX CRC
 CONDURANGAMINES PL JSG
 CONDURANGIN 10,000-20,000 BK HHB
 CONDURANGOGLYCOSIDE BK HHB
 CONDURITOL 5,000 BK HHB
 D-CYMAROSE BK HHB

DEHYDRODREVOGENIN-D BK HHB
 DREVOGENIN-D BK HHB
 EO 100 PL 411/
 D-GLUCOSE BK HHB
 SITOSTEROL BK HHB
 TANNIN PL CRC
 D-THEVETOSE BK HHB

MARRUBIUM VULGARE L.

“HOREHOUND”

ASCORBIC-ACID
 BETONICINE 3,000 PL AYL 411/
 CAFFEIC-ACID
 CAMPHENE PL 411/
 CHOLINE 2,000 PL AYL 411/
 P-CYMENE AYL
 P-CYMOL PL 411/
 DIHYDROPEREGRININ PL 411/
 EO 500-600
 FAT 264,000-372,000 SD
 FENCHENE PL 411/
 GALLIC-ACID
 LIMONENE AYL
 MARRUBENOL PL JSG/
 MARRUBIIN 3,000-10,000 WOI
 MARRUBIOL PL 411/
 MUCILAGE
 PECTIN
 PEREGRININ PL 411/
 PEREGRINOL PL JSG
 ALPHA-PINENE PL 411/
 PREMARRUBIIN PL 411/
 PROTEIN 185,000-256,000 SD
 RESIN
 SABINENE AYL
 SCLAREOL PL 411/
 BETA-SITOSTEROL
 BETA-SITOSTEROL-BETA-GLUCOSIDE
 TANNIC-ACID
 TANNIN 65,000-70,000 PL WOI
 ALPHA-TERPINOLENE PL 411/
 TURICINE PL 411/
 URSOLIC-ACID 1,200
 VULGAROL

MATRICARIA RECUTITA L.

“GERMAN CAMOMILE;
 WILD CAMOMILE;
 ANNUAL CAMOMILE”

APIGENIN 1/
 APIGENIN-7-GLUCOSIDE 1/

APIGENIN-7-(6"O-ACETYL)-
 GLUCOSIDE 1/
 APIGENIN-7-APIOSYLGLUCOSIDE 1/
 APIGENIN-7-GLUCOSIDE-(2",3")-
 DIACETATE 1/
 APIGENIN-7-GLUCOSIDE-(3",4")-
 DIACETATE 1/
 ASCORBIC-ACID 1/
 AXILLARIN
 AZULENE 1/
 BISABOLENE 1/
 ALPHA-BISABOLOL 725-10,000 FL HHB
 411/
 ALPHA-BISABOLOLOXIDE-A 1/
 ALPHA-BISABOLOLOXIDE-B 1/
 ALPHA-BISABOLOLOXIDE-C 1/
 ALPHA-BISABOLONEOXIDE-A 1/
 BORNEOL 1/
 BORNYL-ACETATE 1/
 CAFFEIC-ACID 1/
 CALAMENE 1/
 CAPRIC-ACID 1/
 CAPRYLIC-ACID 1/
 3-CARENE 1/
 BETA-CARYOPHYLLENE 1/
 CIS-CARYOPHYLLENE 1/
 CARYOPHYLLENEPOXIDE 1/
 CATECHIN-TANNINS 1/
 CHAMAZULENE 1/
 CHAMOMILLA-ESTER-I 1/
 CHAMOMILLA-ESTER-II 1/
 CHAMOMILLOL 1/
 CHLOROGENIC-ACID 1/
 CHOLINE (0.34-0.38%)FL HHB
 CHRYSOERIOL 1/
 CHRYSOERIOL-7-GLUCOSIDE 1/
 CHRYSOSPLENOL 1/
 CHRYSOSPENTIN 1/
 O-COUMARIC-ACID 1/
 P-COUMARIC-ACID 1/
 ALPHA-CUBEENE 1/
 BETA-DAMASCENONE 1/
 CIS-EN-YN-DICYCLOETHER 1/
 ANTIPHLOGISTIC ANTISPASMODIC
 TRANS-EN-YN-DICYCLOETHER 1/
 2,4-DIHYDROXYBENZOIC-ACID 1/
 2,5-DIHYDROXYBENZOIC-ACID
 3,4-DIHYDROXYCINNAMIC-ACID 1/
 6,3-DIMETHOXYQUERCETIN 1/
 6,7-DIMETHOXYQUERCETIN 1/
 EPSILON-1-(2,6-DIMETHYLPHENYL)-
 2-BUTEN-1-ONE 1/
 EO 2,400-20,000 FL AYL HHB 411/
 ETHYL-BENZOATE 1/

ETHYL-DECANOATE 1/
 ETHYL-PALMITATE 1/
 ETHYL-PHENYLACETATE
 EUPALETIN 1/
 EUPATOLETIN 1/
 FARNESENE 1/
 TRANS-ALPHA-FARNESENE 1/
 TRANS-BETA-FARNESENE 1/
 FARNESOL 1/
 FRUCTOSE 1/
 FURFURAL 1/
 GALACTOSE 1/ FL (15%) HHB
 GALACTURONIC-ACID FL HHB (75%)
 GALLIC-ACID-TANNIN 1/
 GENTISIC-ACID 1/
 GERANIOL 1/
 GLUCOSE FL (7%) HHB
 HERNIARIN 1/
 6-HYDROXY-LUTEOLIN-7-
 GLUCOSIDE 1/
 4-HYDROXY-3-METHOXY-BENZOIC-
 ACID 1/
 3-HYDROXY-2-METHYLIDENE-
 BUTYRIC-ACID-ANGELATE 1/
 HYPEROSIDE 1/
 ISOFERULIC-ACID 1/
 ISORHAMNETIN 1/
 ISORHAMNETIN-7-GLUCOSIDE 1/
 JACEIDIN 1/
 KAEMPFEROL 1/
 LINOLEIC-ACID 1/
 LUTEOLIN 1/
 LUTEOLIN-4'-GLUCOSIDE 1/
 LUTEOLIN-7-GLUCOSIDE 1/
 LUTEOLIN-7-RHAMNOGLUCOSIDE
 MALIC-ACID 1/
 MATRICARIN 1/
 MATRICIN 1/
 4-METHOXYBENZOIC-ACID 1/
 6-METHOXYKAEMPFEROL 1/
 MUCILAGE 100,000 FL HHB
 ALPHA-MUUROLENE 1/
 NIACIN 1/
 OLEIC-ACID 1/
 PALMITIC-ACID
 PATULETIN 1/
 PATULETIN-7-GLUCOSIDE 1/
 PECTIC-ACID
 PERILLYL-ALCOHOL 1/
 POLYACETYLENE 1/
 QUERCETAGETIN-3,5,6,7,3',4'-
 HEXAMETHYLETHET 1/
 QUERCETAGETIN-3,6,7,3',4'-
 PENTAMETHYLETHET 1/

QUERCETAGETIN-33,6,7,3'-
 TETRAMETHYLETHET 1/
 QUERCETIN 1/
 QUERCETIN-3-GALACTOSIDE 1/
 QUERCETIN-7-GLUCOSIDE 1/
 QUERCETRIN 1/
 QUERCIMERITRIN 1/
 RHAMNOSE 1/
 RUTIN 1/
 SALICYLIC-ACID
 SINAPIC-ACID
 SPATHULENOL 1/
 SPINACETIN 1/
 TANNIN 1/
 THIAMIN 1/
 THUJONE 1/
 TRIACONTANE 1/
 UMBELLIFERONE 1/
 XANTHOXYLIN 1/
 XYLOSE 1/

1/ Qualitative data derived from Mann, C.
 and Staba, E. J. 1986. in: *The Chemistry,
 Pharmacology, and Commercial Formula-
 tions of Chamomile. Herbs, Spices, and
 Medicinal Plants. Vol. 1.* Oryx Press,
 Phoenix. 359 pp.

MEDICAGO SATIVA L.

“ALFALFA”

“LUCERNE”

ACETONE EO
 ADENINE
 ADENOSINE
 ALFALFONE PL WOI
 ALUMINUM 135 PL PED
 4-AMINO-BUTYRIC-ACID RT 411/
 AMYLASE PL WOI
 ARABINOSE PL PED
 ASCORBIC-ACID 1,470-9,364 PL CRC
 ASH 14,000-100,000 PL CRC PED
 ASH 44,000-49,830 SD WOI
 BETAINE
 BIOCHANIN-A PL 411/
 BIOTIN 0.18 PL WOI
 BORON 25 LF JPN14:613
 BORON 17-45 PL NAL(ABS)
 BORON 14 ST JPN14:613
 BUTANONE EO
 CALCIUM 120-17,200 PL CRC
 CAMPESTEROL PL PED
 CARBOHYDRATES 95,000-717,000 PL
 CRC

CARBOHYDRATES 401,000-454,135 SD
 WOI
 BETA-CAROTENE 0.06-394 LF CRC
 CHLOROPHYLLIDE-A PL 411/
 CHOLINE
 CHROMIUM 9 PL PED
 CITRIC-ACID
 COAGULASE PL WOI
 COBALT 115 PL PED
 COUMESTROL PL PED
 CRYPTOXANTHIN PL WOI
 CYCLOARTENOL PL PED
 CYTIDINE
 DAIDZEN PL PED
 DAPHNORETIN PL PED
 11,12-DIMETHOXY-7-
 HYDROXYCOUMESTIN
 EREPSIN PL WOI
 FAT 4,000-43,000 PL CRC PED
 FAT 101,000-123,000 SD CRC
 FIBER 31,000-423,000 PL CRC PED
 FIBER 81,000-91,732 SD WOI
 FOLIC-ACID PL PED
 FORMONONETIN PL PED
 FRUCTOSE PL PED
 FUMARIC-ACID PL WOI
 GENISTEIN PL PED
 GUANINE
 GUANOSINE
 HEDERAGENIN PL PED
 HENTRIACONTANE PL WOI
 L-HOMOSTACHYDRINE SD WOI
 HYDROGEN-CYANIDE
 HYPOXANTHINE
 INOSINE
 INOSITOL
 INVERTASE PL WOIS
 IRON 54-333 PL CRC
 ISOCYTOSINE
 LIMONENE EO
 LUCERNOL PL PED
 LUTEIN PL WOI
 MAGNESIUM 2,300-4,400 PL PED WOI
 MALIC-ACID
 MALONIC-ACID
 MANGANESE 25.3 PL PED
 MEDICAGENIC-ACID PL PED
 MEDICAGOL PL PED
 3'-METHOXYCOUMESTROL
 4-O-METHYLCOUMESTROL
 3-METHYLBUTANOL EO
 2-METHYLPROPANOL EO
 MOLYBDENUM 0.028 LF JPN14:613
 MOLYBDENUM 0.015 ST JPN14:613
 MYRISTONE PL WOI
 NEOXANTHIN PL WOI
 NIACIN 5-97 PL CRC PED
 OCTACOSANOL PL WOI
 OXALIC ACID
 PANTOTHENIC ACID 2-18 PL WOI
 PECTIN
 PECTINASE PL WOI
 PENTANAL EO
 PEROXIDASE PL WOI
 PHAEOPHORBIDE-A PL 411/
 PHOSPHORUS 510-3,100 PL CRC
 POTASSIUM 12,000-20,300 PL CRC PED
 PROPANAL
 PROTEIN 60,000-347,000 LF CRC PED
 PROTEIN 332,000-385,000 SD CRC WOI
 PYRIDOXINE PL PED
 QUINIC-ACID PL WOI
 RIBOFLAVIN 1.4-16.1 PL CRC
 RIBOSE PL PED
 SAPONIN 5,000-20,000
 SATIVOL PL JSG
 SELENIUM 0 PL PED
 SELENIUM 0.026 LF JPN14:613
 SELENIUM 0.015 ST JPN14:613
 SHIKIMIC-ACID
 SILICON TR PL PED
 BETA-SITOSTEROL PL PED
 SODIUM 170 PL PED
 SOYASAPOGENOLS PL WOI
 ALPHA-SPINASTEROL PL PED
 L-STACHYDRINE 1,400 HAY WOI
 STACHYDRINE SD WOI
 STARCH 30,000-80,000 PL PED
 STIGMASTEROL PL PED
 SUCCINIC-ACID PL WOI
 SUCROSE PL PED
 TANNIN 27,000-28,000 HAY
 THIAMIN 1.3-7.5 PL CRC
 TIN TR PL PED
 ALPHA-TOCOPHEROL 26-257 PL CCG
 FNF
 TRIACONTANOL PL WOI
 TRICIN PL WOI
 TRIFOLIOL PL PED
 TRIGONELLINE PL PED
 TRIMETHYLAMINE
 TRYPTOPHAN
 VIOLAXANTHIN PL WOI
 VIT-E PL PED
 VIT-K PL PED
 WATER 812,000-827,000 PL CRC PED
 WATER 117,000 SD WOI
 XANTHOPHYLLS PL WOI

XYLOSE PL PED
ZEAXANTHIN PL WOI
ZINC TR PL PED

Some data from Duke's Plenum Handbook of
Legumes...(1981)

MELALEUCA LEUCADENDRA
(L.) L.

"CAJEPUT"

AZULENE EO
BENZALDEHYDE EO 411/
BETULINIC-ACID BK
BETULIN BK
CAJEPUTOL EO
CINEOLE 1,820-8,450 LF AYL
3,5-DIMETHYL-4,6-DIO-
METHYLPHLORACETOPHENONE
1,300 LF AYL
DIPENTENE pl 411/
EO 13,000 LF TW HHB
EPITARAXERY-ACETATE
FRIEDELIN
GALLIC-ACID
ISOQUERCITRIN
ISOVALERIC-ACID
KAEMPFEROL
KAEMPFEROL-3-GLUCOSIDE
KAEMPFEROL-7-GLUCOSIDE
LIMONENE PL 411/
NEROLIDOL EO 411/
OLEANOLIC-ACID
ALPHA-PINENE
QUERCIMERETRIN
SILICA 2,000-9,500 WD JAD
TARAXASTERONE
TERPINEOL
ALPHA-TERPINEOL EO GEO
URSOLIC-ACID
UVAOL
VALERALDEHYDE EO GEO
VIRIDIFLOROL PL

MELIA AZEDARACH L.

"CHINABERRY"

ACETIC-ACID FR RAA
7-ACETYLNEOTRICHILENONE FR RAA
AESCULETIN LF RAA
ALKALOIDS 400 BK HHB
ALKALOIDS 800 RT
ARGININE SD
AROMADENDRENE WD RAA

ASTRAGALIN FL CCO
AZADARINE FR
AZADARACHTIN FR HHB
AZARIDINE FR RAA
AZEDARACHOL RT BK RAA
BAKALACTONE WD RAA
BAKAYANIC-ACID FR WOI
BAKAYANIN RT HHB
BENZOIC-ACID RT HHB
BENZYL-ACETATE WD RAA
T-CADINOL WD RAA
CAFFEIC-ACID PL JLS58:136
CALCIUM 25,500 LF MPI
CALCIUM 2,310 SD MPI
4-CAMPESTEN-3-ONE RT RAA
CAPROIC-ACID FR RAA
CARBOHYDRATE 586,000 CRC
CARVACROL EO RAA
BETA-CARYOPHYLLENE WD RAA
CATECHIN HHB
DL-CATECHOL BK CCO
CHAVICOL WD RAA
CINNAMIC-ACID FR LF RT CCO RAA
1-CINNAMYLMELIANOLINE PL JSG
CITRONELLYL-ACETATE WD RAA
ALPHA-COPAENE WD RAA
CREOSOL WD RAA
CYCLOEUCALENOL FR RT CCO
CUBENOL WD RAA
CYSTINE SD
DIEPOXYAZADIRADIONE FR RAA
21,23,24,25-DIEPOXI-TIRUCALL-7-EN-21-
OL FR CCO
4',5-DIHYDROXYFLAVONE-7-O-BETA-L-
RHAMNOPYRANOSYL...BK RAA
1,8-DIHYDROXY-2-
METHYLANTHRAQUINONE-3-O-
BETA-D-GALACTOPYRANOSIDE
1,5-DIHYDROXY-8-METHOXY-2-
METHYLANTHRAQUINONE-3-O-
ALPHA-L...
ELEMENE WD RAA
EO 200
17-EPIAZADIRADIONE FR RAA
EPICUBENOL WD RAA
EPI-MELIANOL FR CCO
EUGENOL WD RAA
FAT 40,000-400,000 SD
FERULIC-ACID? PL JLS58:136
FIBER 116,000 SD
FRAXINELLONE HHB
FURFURYL-ALCOHOL WD RAA
GEDUNIN JE15:204.1986
GERANYL-ACETATE WD RAA

GLUCOSE FR WOI
 GLUTAMIC-ACID
 GLYCINE
 GUM PL WBB
 N-HEPTANOL WD RAA
 N-HEXANOL WD RAA
 CIS-3-N-HEXEN-1-OL WD RAA
 3-BETA-HYDROXY-5-CAMPESTEN-7-ONE
 6-HYDROXY-7-METHOXY-COUMARIN LF RAA
 3-BETA-HYDROXY-STIGMAST-5-EN-7-ONE FR RAA
 6-BETA-HYDROXY-STIGMAST-4-EN-3-ONE
 HYPERIN FL
 KAEMPFEROL PL JLS58:136
 KAEMPFEROL-3-RUTINOSIDE LF RAA
 7-KETO-BETA-SITOSTEROL FR
 KILACTONE PL JSG
 KULACTONE
 KULINONE PL JSG
 KULOLACTONE PL JSG
 LEUCINE SD
 LINALYL-ACETATE WD RAA
 LYSINE SD
 MANGROVINE
 MARGOSINE FR
 MELANOL
 MELDENIN SD
 MELIANDIOL PL JSG
 MELIANIN-A PL JSG
 MELIANIN-B PL JSG
 MELIANONE FR HHB
 MELIANTRIOL
 MELIATOXIN-A-1 PL JSG
 MELIATOXIN-A-2 PL JSG
 MELIATOXIN-B-1 PL JSG
 MELIATOXIN-B-2 PL JSG
 MELICITRIN FL CCO
 MELIOTANNIC-ACID FR RAA
 CIS-P-MENTHEN-1-OL WD RAA
 TRANS-P-2-MENTHEN-1-OL WD RAA
 METHIONINE SD
 1-ALPHA-METHOXY-1,2-DIHYDROEPOXYAZADIRADIONE FR RAA
 24-METHYLENECYCLOARTANOL RT RAA
 24-METHYLENECYCLOARTENONE RT RAA
 METHYLKULONATE PL JSG
 MUUROLINE WD RAA
 T-MUUROLOL WD RAA
 NEO-BAKAYANIN FR WOI
 NEROL WD RAA
 NIMBIN
 NIMBININ SD
 NIMBIOL BK CCO
 NIMBOLIDIN-A FR RAA
 NIMBOLIDIN-B FR RAA
 NIMBOLININ-A FR RAA
 OCHCINAL PL JSG
 OHCHININ FR RAA
 OCHINOLAL FR RAA
 OHCHINOLIDE-A FR RAA
 OHCHINOLIDE-B FR RAA
 OHCHINOLOL PL JSG
 3-OCTAL WD RAA
 1-OCTEN-3-OL WD RAA
 PALMITIC-ACID 22,800 SD WOI
 PARAISINE LF RAA
 3-PHENETHYL-ALCOHOL WD RAA
 BETA-PHENYLACETATE WD RAA
 PHOSPHORUS 220-2,300 LF MPI
 PROLINE SD
 PROTEIN 287,000 SD
 QUERCETIN PL JLS58:136
 QUERCETIN-3-O-L-RHAMNOSIDE LF RAA
 QUERCITRIN LF MPI
 RESIN
 7-O-ALPHA-L-RHAMNOPYRANOSYL-(1—4)-BETA-D-GLUCOPYRANOSIL MPI
 RUTIN LF MPI
 SAPONIN BK RT
 SCOPOLETIN LF RAA
 SEDANOLACTONE
 SENDANIN
 SERINE SD
 BETA-SITOSTEROL RT RAA
 BETA-SITOSTEROL-3-O-BETA-D-GLUCOSIDE RT RAA
 SOLANNIN PL JGS
 STARCH FR WOI
 STEARIC-ACID 22,800 SD WOI
 STIGMAST-4-EN-3-ONE RT RAA
 TANNIN 180,000-260,000 BK WBB
 1-TERPEN-4-OL WD RAA
 ALPHA-TERPINEOL WD RAA
 THREONINE SD
 TRIACONTANOL FR RAA
 7-TRICOSANOL FR RAA
 VANNILALDEHYDE PL RAA
 VANILLIC-ACID BK FR RT RAA
 VANILLIN FR CCO

MELILOTUS ALBA MEDIK.**"WHITE MELILOT"**

ASH 41,000 SD JAD
 CAO 6,900 PL JAD
 COUMARIC-ACID PL HHB
 O-COUMARIC-ACID PL HHB
 DICUMAROL PL HHB
 FAT 56,000-83,000 SD CRC JAD
 FIBER 113,000 PL JASD
 FIBER 129,000 SD JAD
 GLUCOSE 27,000 SD JAD
 K2O 8,300 PL JAD
 MELILOTIC-ACID PL HHB
 NITROGEN 8,300 PL JAD
 P2O5 1,600 PL JAD
 PENTOSANS 81,000 SD JAD
 PROTEIN 45,000-165,000 PL JAD
 PROTEIN 364,000-428,000 SD CRCJAD
 QUERCETIN-3-RHAMNOSIDE PL HHB
 RESINS SD JAD
 ROBINOSIDE PL HHB
 SAPONINS 12,000 RT HHB
 STARCH 30,000 SD JAD
 SUGARS 27,000 SD JAD

MELILOTUS INDICA LAM.**"SMALL-FLOWERED MELILOT"**

ASH 85,000-131,000 PL CRC
 CALCIUM 13,400 PL CRC
 CAO 24,900 PL WOI
 CARBOHYDRATES 643,000-699,000 PL CRC
 CELLOBIOSE PL HHB
 FAT 17,000-19,000 PL CRC
 FIBER 149,000-294,000 PL CRC
 FRUCTOSE PL HHB
 GLUCOSE PL HHB
 K2O 15,300 PL WOI
 NITROGEN 33,600 PL WOI
 P2O5 4,900 PL WOI
 PHOSPHORUS 3,500 PL CRC
 PROTEIN 153,000-253,000 PL CRC
 RAFFINOSE PL HHB
 BETA-SITOSTEROL PL HHB
 SORBOSE PL HHB

MELILOTUS OFFICINALIS LAM.**"YELLOW SWEETCLOVER"**

COUMARIC-ACID PL WOI
 COUMARIN 2,000 PL WOI

EO 130 FL WOI
 FAT 19,000-83,000 SD CRC WOI
 HYDROCOUMARIN PL WOI
 MELILOTIC-ACID PL WOI
 PROTEIN 128,000-416,000 SD CRC

MELISSA OFFICINALIS L.**"LEMONBALM"**

BETA-BOURBONENE 1-48
 DELTA-CADINENE 1-27
 GAMMA-CADINENE 1-25
 10-ALPHA-CADINOL 1-8
 CAFFEIC-ACID PL 411/
 CARYOPHYLLENE 9-238
 CARYOPHYLLENE-OXIDE 2-62
 CATECHINS 30,000-50,000
 CHLOROGENIC-ACID
 CITRAL-A
 CITRAL-B
 CITRONELLAL 1-18
 (+)-CITRONELLAL 39-975
 COPAENE 4-120
 ALPHA-CUBEENE 1-38
 EO 100-2,500 FUNGICIDE(400PPM)
 EUGENYL-ACETATE PL 411/
 FAT 115,000 SD
 GERANIAL 15-930
 GERANIOL 1-2
 GERANYL-ACETATE 1-12
 GERMACRENE-D 4-105
 CIS-3-HEXENOL 1-2
 ALPHA-HUMULENE 1-5
 ISOGERANIAL
 LINALOOL 1-10
 LUTEOLIN-7-GLUCOSIDE PL 411/
 METHYL-HEPTENONE
 NERAL 14-602
 NEROL 1-2
 CIS-OCIMENE 1-22
 TRANS-OCIMENE 1-55
 3-OCTANOL 1-2
 3-OCTANONE 1-15
 1-OCTEN-3-OL 1-50
 OCTYL-BENZOATE ABS
 OLEANOLIC-ACID
 POMOLIC-ACID PL 411/
 PROTEIN 293,000 SD
 PROTOCATECHUIC-ACID PL 411/
 RHAMNAZIN PL 411/
 ROSMARIC-ACID 8,400
 ROSMARINIC-ACID 37,000 PL FT62:166
 STACHYOSE

SUCCINIC-ACID
THYMOL
URSOLIC-ACID PL 411/
WAX

MENISPERMUM CANADENSE L.

“MOONSEED”

ACUTIMIDINE RH
ACUTIMINE RH JSG
BERBERINE NAP
DAURICINE RH JSG
DAURINOLINE RH
DEHYDROCHEILANTHIFOLIN
N-DESMETHYLDAURICIN
FAT 160,000 SD
MAGNOFLORINE
N-METHYLINDCARPINMETHIODIDE
PROTEIN 131,000 SD
TETRANDRINE RH
VIBURNITOL LF ST

MENTHA AQUATICA L.

“WATER MINT”

ACACETIN PL JSG
ACACETIN-7-RUTINOSIDE PL JSG
ACETONE LF NAP
APIGENIN PL JSG
APIGENIN-7-BETA-D-
GLUCOPYRANOSIDE PL JSG
APIGENIN-7-RUTINOSIDE PL JSG
CARVONE 510-1,785 LF JAD NAP
CARYOPHYLLENE LF NAP
BETA-CARYOPHYLLENE 300-850 LF
JAD NAP
CINEOLE 63-1,904 LF JAD NAP
1,8-CINEOLE LF NAP
P-CYMOL 6-51 LF JAD NAP
EO 3,000-8,500 LF HHB
ERIODICTYOL-7-BETA-D-
GLUCOPYRANOSIDE
PL JSG
ERIODICTYOL-7-RUTINOSIDE PL JSG
FORMIC-ACID LF NAP
FURFURAL LF NAP
HESPERETIN PL JSG
HESPERETIN-7-BETA-D-
GLUCOPYRANOSIDE PL JSG
ISOMENTHONE 30-170 LF JAD NAP
(+)-ISOMENTHONE 1,230-3,485 LF JAD
NAP
LIMONENE 114-714 LF JAD NAP

LINALOOL 1,080-3,060 LF HHB
LINALYL-ACETATE LF HHB
LUTEOLIN-7-BETA-D-
GLUCOPYRANOSIDE PL JSG
LUTEOLIN-7-RUTINOSIDE PL JSG
MELISSIC-ACID TR LF HHB
MENTHOFURAN 30-7,582 LF JAD NAP
WOI
MENTHOL TR-3,570 LF JAD NAP
MENTHONE 23-212 LF JAD NAP WOI
MENTHYL-ACETATE TR-1,900 LF JAD
NAP WOI
MENTHYL-VALERATE LF WOI
MYRCENE LF NAP
NEOMENTHOL TR LF NAP
OCTAN-3-OL 3-162 LF JAD NAP
OCTAN-3-OL-ACETATE LF NAP
ALPHA-PINENE 18-68 LF JAD NAP
BETA-PINENE 15-315 LF JAD NAP
PIPERITENONE LF NAP
PIPERITONE LF WOI
PIPERITONE-OXIDE LF NAP
PULEGONE 54-153 LF JAD NAP
(+)-PULEGONE TR-510 LF JAD NAP
ROSMARINIC-ACID 27,000 PL FT62:166
TANNIN 74,000 LF HHB
TERPINENE LF HHB
VIRIDIFLOROL 36-102 LF JAD NAP

MENTHA ARVENSIS L.

“CORN MINT; FIELD MINT;
JAPANESE MINT”

ACACETIN-7-O-BETA-D-GLUCOSIDE
SH NAP
ACETIC-ACID PL GEO
(+)-8-ACETOXY-CARVONE EO NAP
ACETYLMENTHOL PL CCO
ANISALDEHYDE SH NAP
CALCIUM 13,500 PL SMO
CAMPHENE PL GEO
BETA-CAR-3-ENE EO NAP
CAPROIC-ACID PL GEO
CARVOMENTHONE PL HHB
CARVONE 8,100-26,000 LF JAD NAP
(+)-CARVONE EO NAP
(-)-CARVONE EO NAP
CARYOPHYLLENE PL GEO
CHLOROPHYLL-A TC NAP
CHLOROPHYLL-B TC NAP
CINEOLE 40-1,785 LF JAD NAP
1,8-CINEOLE LF NAP
COPPER 20 PL SMO

- P-CYMENTHENE 9-29 LF JAD NAP
 P-CYMOL 562-1,800 LF JAD NAP
 3-(5',5'-DIMETHYL-TETRAHYDROFU-
 RAN-2'-YL)-BUT-CIS-2-EN-1-OL 1.4 EO
 NAP
 DIOSMETIN-7-O-BETA-D-GLUCOSIDE
 SH NAP
 EO 10,000-32,100 PL HHB
 ETHYL-AMYL-CARBINOL PL GEO
 EUGENOL EO NAP
 FORMIC-ACID PL GEO
 FURFURAL 2-5 PL GEO
 GERMACRENE-D EO NAP
 HESPERIDIN PL HHB
 ALPHA,BETA-HEXENIC-ACID PL GEO
 ALPHA,GAMMA-HEXENYL-PHENYL-
 ACETATE PL GEO
 IRON 400 PL SMO
 ISOMENTHOL EO NAP
 (+)-ISOMENTHONE 240-7,062 LF GEO
 JAD NAP
 DL-ISOMENTHONE PL GEO
 ISOPULEGOL EO NAP
 ISOPULEGONE 240-770 LF JAD NAP
 CIS-ISOPULEGONE LF NAP
 TRANS-ISOPULEGONE LF NAP
 ISOVALERALDEHYDE PL GEO
 ISOVALERIC-ACID 30-90 PL GEO
 KETONES 336-1,008 PL GEO
 LIMONENE 20-3,520 LF JAD NAP
 (-)-LIMONENE LF NAP
 LINALOOL LF NAP
 LINALOOL-ACETATE 690-2,215 LF JAD
 NAP
 LUTEOLIN SH NAP
 MAGNESIUM 2,830 PL SMO
 MANGANESE 44 PL SMO
 P-MENTHAN-TRANS-2,5-DIOL PL HHB
 1-P-MENTHEN-3-ONE PL GEO
 MENTHOFURAN 4,200-12,600 PL AYL
 HHB
 (+)-MENTHOFURAN TR-32 LF JAD NAP
 MENTHOFUROLACTONE PL HHB
 MENTHOL 1,000-24,385 LF HHB JAD
 NAP
 (-)-MENTHOL 66-25,650 LF HHB JAD
 NAP
 MENTHOL-ACETATE 60-2,215 LF JAD
 NAP
 (-)-MENTHOL-ACETATE 10-32 LF JAD
 NAP
 L-MENTHOL 373-29,515 PL GEO JAD
 NAP
 MENTHONE 71-24,000 PL BML JAD NAP
 (-)-MENTHONE 250-25,680 LF GEO JAD
 NAP
 MENTHONONE PL CCO
 L-MENTHYL-ACETATE 85-4,200 PL
 AYL GEO
 3-METHYLPENTANOL PL HHB
 MYRCENE 10-2,485 LF JAD NAP
 NEOISOMENTHOL EO NAP
 NEOISOPULEGONE EO NAP
 (+)-NEOMENTHOL 20-580 LF GEO JAD
 NAP
 CIS-OCIMENE EO NAP
 TRANS-OCIMENE EO NAP
 OCTAN-3-OL 0-10,200 LF JAD NAP
 (+)-OCTAN-3-ONE 9,000-27,000 LF JAD
 NAP
 D-3-OCTANOL PL GEO
 BETA-PHELLANDRENE PL HHB
 ALPHA-PINENE 10-300 PL GEO JAD
 NAP
 BETA-PINENE 10-1,445 PL JAD NAP
 PIPERITENONE PL CCO
 PIPERITENONE-OXIDE 260-7,320 LF
 JAD NAP
 PIPERITONE 13-1,285 LF GEO JAD NAP
 (+)-PIPERITONE 90-290 LF JAD NAP
 (-)-PIPERITONE 240-7,700 LF JAD NAP
 PIPERITONE-OXIDE 320-5,135 LF JAD
 NAP
 PIPERITONE-OXIDE PL HHB
 POTASSIUM 35,100 PL SMO
 PULEGONE 100-24,960 PL BML HHB
 (+)-PULEGONE TR-25,455 PL JAD NAP
 RAFFINOSE PL AYL
 RESIN PL AYL
 ROSMARINIC-ACID 71-228 LF AYL JAD
 NAP
 ROSMARINIC-ACID 28,000 PL FT62:166
 SABINENE-HYDRATE 30-160 LF JAD
 NAP
 SANTENE PL HHB
 SODIUM 860 PL SMO
 STACHYOSE PL AYL
 TANNIN PL AYL
 GAMMA-TERPINENE EO NAP
 3',4',5,7-TETRAHYDROXY-FLAVONE-7-
 ALPHA-L-RHAMNOSYL-BETA-D-
 GLUCOSIDE SH NAP
 ALPHA-THUJENE PL HHB
 THUJONE PL HHB
 4',5,7-TRIHYDROXY-FLAVONE-O-BETA-
 D-GLUCOSIDE SH NAP

3',5,7-TRIHYDROXY-4'-METHOXY-
FLAVONE-O-BETA-D-GLUCOSIDE SH
NAP
4',5,7-TRIHYDROXY-FLAVONE-7-
ALPHA-L-RHAMNOSYL-BETA-D-
GLUCOSIDE SH NAP
ZINC 28 PL SMO

MENTHA LONGIFOLIA (L.)
HUDS.

"BIBLICAL MINT"

ACACETIN-7-RUTINOSIDE PL HHB
APIGENIN-7-GLUCURONIDE PL HHB
ALLO-AROMADENDRENE 0-380 SH
BML
BORNEOL 1-1,250 SH JEO3:57
BORNYL-ACETATE 1-175 SH JEO3:57
BETA-BOURBONENE 1-40 SH BML
DELTA-CADINENE 0-115 SH BML
GAMMA-CADINENE 1-75 SH BML
CAMPHENE 0-385 SH BML JEO3:57
CIS-CARVEOL 10-115 SH BML
TRANS-CARVEOL 1-340 SH BML
CARVONE 0-29,560 SH BML
CIS-CARVYL-ACETATE 0-530 SH BML
TRANS-CARVYL-ACETATE 1 SH BML
CARYOPHYLLENE 110-9,995 SH BML
BETA-CARYOPHYLLENE 30-160 SH
JEO3:57
CARYOPHYLLENE-OXIDE 0-835 SH
BML
1,8-CINEOLE 30-10,930 SH BML JEO3:57
BETA-COPAENE 0-455 SH BML
P-CYMENE 1-23 SH BML JEO3:57
DIHYDROCARVEOL 1-3,150 SH BML
CIS-DIHYDROCARVONE 40-5,090 SH
BML
TRANS-DIHYDROCARVONE 20-1,365
SH BML
DIHYDROCARVYL-ACETATE 30-3,570
SH BML
DIOSMIN PL HHB
BETA-ELEMENE 0-190 SH BML
EO 10,000-38,000 PL HHB JEO3:57
1,2-EPOXYNEOMENTHYL-ACETATE 1-
3,190 SH BML
ERIODICTYOL-7-RUTINOSIDE PL HHB
GERANIOL 1-115 SH JEO3:57
GERANYL-ACETATE 1-45 SH JEO3:57
GERMACRENE-D 140-8,850 SH BML
ALPHA-GURJUNENE 0-1 SH BML

HEDYOSMIN PL HHB
HESPERIDIN PL HHB
CIS-3-HEXENYL-2-METHYLBUTYRATE
0-225 SH BML
4-HYDROXYPIPERITONE 1-685 SH BML
ISOBUTANAL 10-38 SH JEO3:57
ISOMENTHONE 0-225 SH BML JEO3:57
ISOPIPERITENONE 1-115 SH BML
CIS-JASMONE 0-85 SH BML JEO3:57
LIMONENE 7-800 SH BML JEO3:57
LINALOOL 10-33,360 SH BML JEO3:57
LUTEOLIN-7-GLUCOSIDE PL HHB
LUTEOLIN-7-GLUCURONIDE PL HHB
LUTEOLIN-7-RUTINOSIDE PL HHB
MENTHOFURAN 12-45 SH JEO3:57
MENTHOL 20-300 SH BML
MENTHONE 1-1,840 SH JEO3:57
2-METHYLBUTYL-2-
METHYLBUTYRATE 0-20 SH BML
MYRCENE 50-550 SH BML JEO3:57
MYRTENAL 1-100 SH JEO3:57
MYRTENOL 1-35 SH JEO3:57
NEODIHYDROCARVEOL 50-645 SH
BML
NONANAL 1-22 SH JEO3:57
CIS-OCIMENE 1-685 SH BML
TRANS-OCIMENE 1-38 SH BML
OCTANOL 1-34 SH JEO3:57
3-OCTANOL 1-2,395 SH BML JEO3:57
1-OCTEN-3-OL 1-150 SH BML
3-OCTYL-ACETATE 0-40 SH BML
PHENYLETHYL-2-METHYLBUTYRATE
1-60 SH JEO3:57
ALPHA-PINENE 30-1,065 SH BML
JEO3:57
BETA-PINENE 28-1,160 SH JEO3:57
PIPERITENONE 1-9,920 SH BML JEO3:57
PIPERITENONE-OXIDE 1-4,215 SH BML
JEO3:57
PIPERITONE 80-5,270 SH JEO3:57
CIS-PIPERITONE-OXIDE 1-7,865 SH
BML JEO3:57
TRANS-PIPERITONE-OXIDE 780-26,900
SH BML
PULEGONE 0-26,600 SH BML JEO3:57
QUERCITRIN PL HHB
SABINENE 20-750 SH BML JEO3:57
TRANS-SABINENE-HYDRATE 1-80 SH
JEO3:57
SPATHULENOL 0-340 SH BML
TERPINEN-4-OL 1-800 SH BML JEO3:57
ALPHA-TERPINENE 0-170 SH BML
JEO3:57

GAMMA-TERPINENE 0-38 SH
 BMLJEO3:57
 ALPHA-TERPINEOL 1-1,175 SH BML
 JEO3:57
 TERPINOLENE 0-20 SH BMLJEO3:57
 THYMOL 1-15 SH JEO3:57
 BETA-YLANGENE 0-340 SH BML

MENTHA PULEGIUM L.

"EUROPEAN PENNYROYAL"

ACETIC-ACID EO NAP
 ALUMINUM 1,850 PL PED
 AROMADENDRENE PL NAP
 ASH 73,000 PL PED
 BETA-BOURBONENE 15-30 BML
 BUTYRIC-ACID EO NAP
 CADINENE 87-174 PL JAD NAP
 CALCIUM 9,440-16,870 PL FNF PED
 CAMPHENE 1-70 PL JAD NAP
 (+)-CAMPHENE 106-212 PL JAD NAP
 CARVACROL 100-400 PL JAD NAP
 CARVONE EO NAP
 CARYOPHYLLENE 10-60 PL CRC JAD
 NAP
 BETA-CARYOPHYLLENE PL NAP
 CHROMIUM 17 PL PED
 CINEOLE 2-600 PL JAD NAP
 1,8-CINEOLE 20 BML CRC
 CITRONELLOL 90-180 PL JAD NAP
 COBALT 14 PL PED
 O-CRESOL EO NAP
 P-CRESOL EO NAP
 P-CYMENE 3-610 PL BML CRC JAD
 NAP
 CYMOL 160-320 PL JAD NAP
 P-CYMOL 30-60 PL JAD NAP
 DEHYDROMENTHOFURAN-OXIDE PL
 NAP
 DEHYDROXYMENTHOFURAN-OXIDE
 DECYLIC-ACID EO NAP
 DIOSMIN LF NAP
 DIPENTENE
 EO 10,000-20,000 PL BML GEO HHB
 WOI
 EUGENOL 160-320 PL CRC JAD NAP
 FAT 45,000 PL PED
 FAT 266,000 SD
 FENCHENE 70-140 PL JAD NAP
 BETA-FENCHENE 1-6 PL JAD NAP
 FENCHONE 10-20 PL JAD NAP
 FIBER 123,000 PL PED
 FORMIC-ACID EO NAP
 GERMACRENE-D

GUAIAZULENE PL NAP
 HESPERIDIN
 HEXAN-1-OL EO NAP
 ALPHA-HUMULENE 70-140 BML
 BETA-HUMULENE PL NAP
 IRON 2,310 PL PED
 DELTA-ISOBUTYRL-VALERIC-ACID-
 BETA-MENTHOL PL NAP
 ISOHEPTYLIC-ACID EO NAP
 (+)-ISOISOPULEGONE 22-76 PL JAD
 NAP
 ISOMENTHOL 1-10 PL JAD NAP
 ISOMENTHONE 0-8,420 PL JAD NAP
 (+)-ISOMENTHONE 521-4,140 PL JAD
 NAP
 ISOPIPERITENONE TR-80 PL BML JAD
 NAP
 ISOPIPERITONE PL NAP
 ISOPULEGOL 680-1,360 PL NAP
 ISOPULEGONE 525-2,014 PL JAD NAP
 (+)-ISOPULEGONE PL NAP
 (-)-ISOPULEGONE 65-154 PL JAD NAP
 CIS-ISOPULEGONE 20-120 PL BML JAD
 TRANS-ISOPULEGONE 70-320 PL BML
 JAD
 KILOCALORIES 3,490 PL PED
 LAURIC-ACID EO NAP
 LIMONENE 10-2,200 PL BML CRC JAD
 NAP
 (+)-LIMONENE 10-290 PL JAD NAP
 (-)-LIMONENE 41-148 PL JAD NAP
 LINALOOL 15-30 PL BML JAD
 LINALOOL-ACETATE 10-820 PL JAD
 NAP
 LINALOOL-ISOVALERATE 130-260 PL
 JAD NAP
 MAGNESIUM 5,500 PL PED
 MANGANESE 83 PL PED
 P-MENTHA-1,4(8)-DIENE PL NAP
 P-MENTHANE 40-80 PL JAD NAP
 MENTHENE 280-560 PL JAD NAP
 DELTA-MENTHENONE EO NAP
 MENTHOFURAN 1-160 PL BML JAD
 NAP
 MENTHOFURAN-OXIDE PL NAP
 MENTHOL TR-3,780 PL JAD NAP
 (+)-MENTHOL 1,624-3,248 PL JAD NAP
 (-)-MENTHOL 1-22 PL JAD NAP
 MENTHOL-ACETATE PL NAP
 MENTHONE 10-6,160 PL BML JAD
 NAP
 (+)-MENTHONE 680-1,360 PL JAD NAP
 (-)-MENTHONE 50-6,160 PL JAD NAP
 BETA-METHYL-ADIPIC-ACID EO NAP

1-METHYL-CYCLOHEXAN-3-OL EO NAP
 1-METHYL-CYCLOHEXAN-3-ONE 80-160 EO JADNAP
 1-METHYL-CYCLOHEX-1-EN-3-ONE EO NAP
 1-METHYL-CYCLOHEX-1-ONE EO NAP
 1-METHYL-CYCLOHEXANOL EO NAP
 3-METHYL-CYCLOHEXAN-1-OL EO NAP
 3-METHYLCYCLOHEXANONE 70-140 BML JAD
 BETA-METHYL-DELTA-ISOBUTYLVALERIC-ACID
 MYRCENE 27-600 BML CRC JAD NAP
 MYRISTIC-ACID EO NAP
 NEOISOMENTHOL 30-1,160 PL BML JAD
 (+)-NEOISOMENTHOL 65-1,150 PL JAD NAP
 NEOISOMENTHOL-ACETATE 30-286 PL JAD NAP
 NEOISOPULEGOL PL NAP
 NEOMENTHOL 1-3,880 PL JAD NAP
 (+)-NEOMENTHOL 1-604 PL JAD NAP
 NEPETALACTONE PL NAP
 NEROL 10-20 PL JAD NAP
 OCIMENE 25-50 PL JAD NAP
 TRANS-BETA-OCIMENE 1-8 PL JAD NAP
 OCTAN-1-OL EO NAP
 OCTAN-1-OL-ACETATE EO NAP
 OCTAN-3-OL 20-440 PL BML JAD NAP
 (+)-OCTAN-3-OL 149-416 PL BML JAD NAP
 OCTAN-3-OL-ACETATE 12-160 PL JAD NAP
 OCTAN-3-ONE EO BML NAP
 OCT-1-EN-3-OL EO BML NAP
 (-)-OCT-3-EN-1-OL EO BML NAP
 OCTEN-1-OL EO NAP
 OCTOIC-ACID EO NAP
 3-OCTYLACETATE 10-80 BML CRC
 OCTYLIC-ACID EO NAP
 PALMITIC-ACID EO NAP
 ALPHA-PHELLANDRENE 30-60 PL JAD NAP
 BETA-PHELLANDRENE 3-400 PL JAD NAP
 PHENOL EO NAP
 PHOSPHORUS 2,520 PL PED
 ALPHA-PINENE 20-520 PL BML CRC JAD NAP

BETA-PINENE 20-288 PL BML CRC JAD NAP
 PIPERITENOL 100-200 PL JAD NAP
 PIPERITENONE 30-4,800 PL JAD NAP
 PIPERITOL 10-20 PL JAD NAP
 PIPERITOL-ACETATE 100-200 PL JAD NAP
 PIPERITONE 10-11,000 PL JAD NAP
 (-)-PIPERITONE 9-86 PL JAD NAP
 PIPERTENONE 33-66 PL JAD NAP
 POTASSIUM 10,500-15,310 PL FNF PED
 PROTEIN 100,000-112,000 PL FNF PED
 PROTEIN 100,000-246,000 SD
 PULEGOL 400-800 PL JAD NAP
 PULEGONE 520-18,800 PL BML JAD NAP
 (+)-PULEGONE 0-19,400 PL BML JAD NAP
 PULEGONE-EPOXIDE PL NAP
 CIS-PULEGONE-OXIDE PL NAP
 TRANS-PULEGONE-OXIDE PL NAP
 ROSMARINIC-ACID 30,000 PL FT62:166
 SABINENE 8-140 PL BML JAD NAP
 SALICYLALDEHYDE EO NAP
 SALICYLIC-ACID EO NAP
 SALICYLIC-ACID-METHYL-ESTER EO NAP
 SELENIUM 25 PL PED
 SILICON 182 PL PED
 SODIUM 2,790-5,410 PL FNF PED
 TANNIN 40,000
 ALPHA-TERPINENE TR-20 PL JAD NAP
 GAMMA-TERPINENE TR-50 PL JAD NAP
 ALPHA-TERPINEOL 70-140
 TERPINENOL 10-20 PL JAD NAP
 TERPINOLENE 1-90 PL JAD NAP
 THUJONE 10-20 PL JAD NAP
 THYMOL PL NAP
 TIN 24 PL PED
 1,1,3-TRIMETHYL-CYCLOPENTANONE EO NAP
 1,1,3-TRIMETHYL-CYCLOPENTAN-4-ONE EO NAP
 WATER 912,000 PL PED
 ZINC 56 PL PED

MENTHA SPICATA L.

“SPEARMINT”

ACETIC-ACID PL GEO
 ACETOIN LF NAP
 ACETONE LF NAP
 ACETOPHENONE LF NAP

- 2-AMINO-ADIPIC-ACID 1.6 SH NAP
 2-AMYL-FURAN LF NAP
 APIGENIN LF HHB
 ARGININE LF NAP
 ASH 16,000-94,000 PL WOI
 BENZALDEHYDE LF NAP
 BENZYL-ALCOHOL LF NAP
 BENZYL-ISOBUTYRATE LF NAP
 BENZYL-2-METHYL-BUTYRATE LF
 NAP
 BICYCLOELEMENE LF NAP
 BORNEOL LF NAP
 BETA-BOURBONENE 2-50 LF BML HHB
 N-BUTYRALDEHYDE LF NAP
 BUTYRIC-ACID PL GEO
 DELTA-CADINENE 2-38 LF BML HHB
 GAMMA-CADINENE 2-33 LF BML HHB
 CADINOL LF BML
 CALCIUM 2,000-11,760 PL WOI
 CAMPHENE LF BML
 CAPROIC-ACID PL GEO
 CAPRYLIC-ACID PL GEO
 CARBOHYDRATE 80,000-588,300 PL
 WOI
 CAR-3-ENE LF NAP
 BETA-CAROTENE 2-10 LF CRC WOI
 CARVACROL LF BML
 CIS-CARVEOL 4-100 LF BML HHB
 TRANS-CARVEOL 2-50 LF BML HHB
 CARVONE 495-20,000 PL BML GEO
 HHB JAD NAP
 (-)-CARVONE LF NAP
 CIS-CARVONE-OXIDE LF NAP
 CIS-CARVONE-OXIDE LF NAP
 CARVONE-8,9-OXIDE LF NAP
 CARVONE-10-ACETATE LF NAP
 CIS-CARVYL-ACETATE 18-450 LF BML
 HHB
 TRANS-CARVYL-ACETATE 3-75 LF
 BML HHB
 CIS-CARVYL-FORMATE LF NAP
 TRANS-CARVYL-FORMATE LF NAP
 CARVYL-6,7-OXIDE-ACETATE LF NAP
 CARYOPHYLLENE 3-1,950 LF BML
 HHB JAD NAP
 BETA-CARYOPHYLLENE LF NAP
 BETA-CARYOPHYLLENE-OXIDE LF
 NAP
 CHLOROFORM LF NAP
 CHLOROPHYLL-A 2,755 LF NAP
 CHLOROPHYLL-B 1,299 LF NAP
 CINEOLE 10-1,500 LF NAP
 1,8-CINEOLE 80-9,375 PL BML GEO
 HHB
 COPAENE LF NAP
 CIS-BETA-COPAENE LF NAP
 TRANS-BETA-COPAENE LF NAP
 COPPER 1-2 PL WOI
 P-CYMENE LF NAP
 P-CYMOL 3-75 LF JAD NAP
 P-CYMEN-8-OL LF NAP
 DECAN-1-OL PL NAP
 DECAN-3-OL PL NAP
 DIACETYL LF NAP
 CIS-2,5-DIETHYL-TETRAHYDROFURAN
 LF NAP
 DEHYDROCARVACROL LF NAP
 DIHYDROCARVEOL 13-325 LF BML
 HHB
 DIHYDROCARVONE 18-4,475 LF BML
 HHB JAD NAP
 (+)-DIHYDROCARVONE 550-13,750 LF
 JAD NAP
 DIHYDROCARVYL-ACETATE 16-400 LF
 BML HHB
 DIMETHYL-SULFIDE LF NAP
 DIMETHYL-SULFOXIDE LF NAP
 3-(5',5'-DIMETHYL-TETRAHYDROFU-
 RAN-2'-YL)-BUT-CIS-2-EN-1-OL 3-75
 LF JAD NAP
 DIOSMIN LF HHB
 DIOSMETIN PL 411/
 DIOSMETIN-7-O-BETA-D-GLUCU-
 RONIDE LF NAP
 DIOSMETIN-7-GLUCOSIDE PL GEO
 BETA-ELEMENE LF BML
 ELEMOL LF BML
 EO 1,000-25,000 LF GEO HHB
 EPIBULGARENE LF NAP
 EPIMUROLENE LF NAP
 ETHANOL LF NAP
 2-ETHYL-FURAN LF NAP
 ETHYL-ISOBUTYRATE LF NAP
 ETHYL-N-VALERATE LF NAP
 EUGENOL LF BML
 FARNESENE LF BML
 FARNESOL LF BML
 FAT 6,000-35,294 PL WOI
 ALPHA-FENCHENE LF NAP
 FIBER 20,000-118,000 PL CRC
 FURFURAL LF NAP
 GERANIOL LF BML
 GERANYL-ACETONE LF NAP
 HEPTAN-1-AL PL NAP
 HEPTAN-3-OL PL NAP
 HEPTAN-3-ONE PL NAP
 HEPTAN-1-YL-ISOVALERATE PL
 NAP

HEPTAN-1-YL-2-METHYL-BUTYRATE
 PL NAP
 HEPT-CIS-4-EN-1-AL LF NAP
 HEPT-TRANS-2-EN-1-AL LF NAP
 HESPERIDIN PL HHB
 HEXAHYDRO-FARNESYL-ACTONE LF
 NAP
 HEXAN-1-AL LF NAP
 HEXAN-1-OL LF NAP
 HEXAN-1-YL-2-ISOVALERATE LF NAP
 HEXAN-1-YL-2-METHYL-BUTYRATE
 LF NAP
 HEXAN-1-YL-PHENYLACETATE LF
 NAP
 HEX-CIS-3-EN-1-OL LF NAP
 HEX-TRANS-2-EN-1-OL LF NAP
 HEX-TRANS-3-EN-1-OL LF NAP
 HEX-CIS-3-EN-1-OL-ACETATE LF NAP
 HEX-TRANS-2-EN-1-OL-ACETATE LF
 NAP
 HEX-CIS-3-EN-1-OL-ISOBUTYRATE LF
 NAP
 HEX-CIS-3-EN-1-OL-ISOVALERATE 2-50
 LF BML HHB NAP
 HEX-CIS-3-EN-1-OL-2-METHYL-
 BUTYRATE LF NAP
 HEX-CIS-3-EN-1-OL-PHENYLACETATE
 LF NAP
 ALPHA-HUMULENE LF NAP
 BETA-HUMULENE LF BML
 8-HYDROXY-9-ACETOXY-MENTH-1-
 ENE LF NAP
 1-HYDROXY-2-ACETOXY-P-MENTH-
 8(9)-ENE LF NAP
 5-HYDROXY-CARVONE PL NAP
 4-HYDROXY-PIPERITONE PL NAP
 BETA-IONONE LF NAP
 IRON 156-918 PL CRC WOI
 ISOAMYL-ISOVALERATE PL NAP
 ISOAMYL-2-METHYL-BUTYRATE PL
 NAP
 ISOBORNYL-ACETATE 11-275 LF BML
 HHB
 ISOBUTYL-2-METHYL-BUTYRATE LF
 NAP
 ISOBUTYRALDEHYDE LF NAP
 ISOCARYOPHYLLENE LF NAP
 ISODIHYDROCARVONE 75-1,875 LF
 JAD NAP
 ISOLEUCINE LF NAP
 ISOMENTHONE 50-125 LF BML HHB
 (+)-ISOMENTHONE 23-575 LF JAD NAP
 ISOPINOCAMPHONE LF NAP
 JASMONE LF NAP
 CIS-JASMONE 1-25 LF BML HHB
 TRANS-JASMONE LF NAP
 LAVANDULYL-BUTYRATE LF NAP
 LEUCINE LF NAP
 LIMONENE 7-9,075 PL BML GEO HHB
 JAD NAP
 PSI-LIMONENE LF NAP
 LIMONENENE-8,9-OXIDE LF NAP
 ALPHA-LIMONENE-1,2-OXIDE LF NAP
 BETA-LIMONENE-1,2-OXIDE LF NAP
 LINALOOL 11-9,375 PL BML GEO HHB
 LUTEOLIN LF HHB
 LUTEOLIN-7-O-BETA-D-GLUCURONIDE
 LF NAP
 LYSINE LF NAP
 METHANOL LF NAP
 P-MENTH-1,8-DIEN-4-OL LF NAP
 P-MENTH-CIS-1(7),8-DIEN-2-OL LF NAP
 P-MENTH-TRANS-1(7),8-DIEN-2-OL LF
 NAP
 P-MENTH-TRANS-2,8-DIEN-1-OL LF
 NAP
 P-MENTH-TRANS-1(7),8-DIEN-2-YL-
 ACETATE LF NAP
 P-MENTH-CIS-2-EN-1-OL LF NAP
 P-MENTH-1(7)-EN-8-OL LF NAP
 (+)-MENTHOFURAN 4-100 LF JAD NAP
 MENTHOL 0-375 LF BML HHB JAD NAP
 (-)-MENTHOL 8-200 LF JAD NAP
 MENTHOL-ACETATE 0-375 LF BML
 HHB JAD NAP
 MENTHONE 4-1,300 LF BML HHB
 (-)-MENTHONE 438-10,950 LF JAD NAP
 METHIONINE LF NAP
 2-METHOXY-4-VINYL-PHENOL SH NAP
 2-METHYL-BUTAN-1-OL LF NAP
 3-METHYL-BUTAN-1-OL LF NAP
 2-METHYL-BUTYL-ISOVALERATE LF
 NAP
 2-METHYL-BUTYRALDEHYDE LF NAP
 2-METHYL-BUTYL-2-METHYL-
 BUTYRATE LF NAP
 2-METHYL-ETHYL-BUTYRATE LF NAP
 METHYL-HEPTENONE LF NAP
 5-METHYL-HEX-2-EN-1-AL LF NAP
 2-METHYL-2-METHYL-BUTYRATE LF
 NAP
 ALPHA-METHYL-P-METHYL-STYRENE
 LF NAP
 2-METHYL-PROPAN-1-OL LF NAP
 MYRCENE 21-1,350 PL JAD NAP
 MYRTENAL LF NAP
 MYRTENOL LF NAP
 MYRTENYL-ACETATE LF NAP

NEODIHYDROCARVEOL 3-75 LF BML HHB
 NEOISOPULEGOL PL NAP
 (+)-NEOMENTHOL 1-25 LF JAD NAP
 NERYL-ACETATE 27-675 LF BML HHB
 NIACIN 4-24 PL WOI
 NONAN-1-AL PL NAP
 NONAN-3-OL PL NAP
 TRANS-BETA-OCIMENE LF NAP
 OCTAN-1-AL LF NAP
 OCTAN-1-OL LF NAP
 OCTAN-1-OL-FORMATE LF NAP
 OCTAN-1-OL-2-METHYL-BUTYRATE LF NAP
 OCTAN-3-OL 4-100 LF BML HHB
 OCTAN-3-OL-ACETATE 2-25 LF BML HHB NAP
 OCTAN-3-ONE LF NAP
 OCT-1-EN-3-OL LF NAP
 OLEANOLIC-ACID LF NAP
 OXALIC-ACID 38 LF WBB
 PENTAN-1-OL LF NAP
 PENT-1-EN-3-OL LF NAP
 PENT-CIS-1-EN-3-OL LF NAP
 PERILLALDEHYDE LF NAP
 PERILLYL-ALCOHOL 1-25 LF BML HHB
 L-PHELLANDRENE
 PHENETHYL-ALCOHOL LF NAP
 BETA-PHENETHYL-ALCOHOL LF NAP
 BETA-PHENETHYL-BUTYRATE LF NAP
 BETA-PHENETHYL-ISOBUTYRATE LF NAP
 BETA-PHENETHYL-ISOVALERATE LF NAP
 BETA-PHENETHYL-METHYL-BUTYRATE LF NAP
 BETA-PHENETHYL-METHYL-ETHER LF NAP
 PHENYL-ACETALDEHYDE LF NAP
 PHENYLALANINE LF NAP
 PHOSPHORUS 800-4,706 PL WOI
 ALPHA-PINENE 5-375 LF BML CRC JAD NAP
 BETA-PINENE 9-3,425 LF BML CRC JAD NAP
 PIN-TRANS-3-EN-2-OL LF NAP
 PINOCAMPHONE LF NAP
 PINOCARVEOL LF NAP
 PINOCARVONE LF NAP
 PIPERITENONE LF NAP
 PIPERITENONE-OXIDE PL CCO
 PIPERITONE PL CCO
 (-)-PIPERITONE 24-600 LF JAD NAP
 PIPERITONE-OXIDE 35-875 LF JAD NAP

POMOLIC-ACID LF NAP
 PROPAN-1-YL-2-METHYL-BUTYRATE LF NAP
 PROPIONALDEHYDE LF NAP
 PROTEIN 48,000-282,240 PL WOI
 PULEGONE 1-475 LF JAD NAP
 (+)-PULEGONE 0-8,300 LF JAD NAP
 RIBOFLAVIN 1-5 PL WOI
 ROSMARINIC-ACID 6,300 LF NAP
 ROSMARINIC-ACID 5,900 SH NAP
 ROSMARINIC-ACID 43,000 PL FT62:166
 SABINENE LF NAP
 SABINENE-HYDRATE 4-300 LF JAD NAP
 SACCHAROPINE 1.6 SH NAP
 SALICYLIC-ACID-METHYL-ESTER LF NAP
 BETA-SITOSTEROL LF NAP
 STIGMASTEROL LF NAP
 TERPINEN-4-OL LF NAP
 GAMMA-TERPINENE LF NAP
 ALPHA-TERPINEOL LF NAP
 TERPINOLENE LF NAP
 THREONINE LF NAP
 THIAMIN 1-3 PL WOI
 ALPHA-THUJENE LF NAP
 THYMOL LF NAP
 TIGLALDEHYDE LF NAP
 TOLUENE LF NAP
 TRYPTOPHAN LF NAP
 URSOLIC-ACID LF NAP
 N-VALERALDEHYDE LF NAP
 VALERIC-ACID PL GEO
 VALINE LF NAP
 VANILLIN LF NAP
 TRANS-VERBENOL LF NAP
 VERBENONE LF NAP
 VIRIDIFLOROL LF NAP
 WATER 0-830,000 PL WOI

MENTHA X PIPERITA

"PEPPERMINT"

ACETALDEHYDE WOI
 ACETIC-ACID WOI
 ALUMINUM 62 LF PED
 ALPHA-AMORPHENE EO NAP
 AMYL-ALCOHOL
 AMYL-VALERATE 0.1-1 LF JAD NAP
 ANETHOLE 0.001-0.01 LF JAD NAP
 ASH 141,000 LF PED
 AZULENE PL 411/
 BENZOIC-ACID 0.02-0.2 LF JAD NAP

BENZYL-ALCOHOL 0.01-0.1 LF JAD NAP	GAMMA-DECALACTONE 0.001-0.01 LF JAD NAP
BENZYL-CYANIDE 0.002-0.02 LF JAD NAP	5-O-DEMETHYL-NOBILETIN LF NAP
BETAINE LF PED	DIHYDROCARVONE LF NAP
BETA-BETULENOL PL JSG	DIHYDRO-LIMONENE-10-OL EO NAP
BICYCLOELEMENE AYL	DIHYDRO-TERPINEOL-ACETATE 0.001- 0.01 LF JAD NAP
BISABOLENE EO PED	5,6-DIHYDROXY-3',4',7,8- TETRAMETHOXY-FLAVONE LF NAP
BOVOLIDE 0.001-0.01 LF JAD NAP	3,4-DIMETHOXY-BENZALDEHYDE 0.002-0.02 LF JAD NAP
BUTAN-2-ONE 0.001-0.01 EO NAP	1,4-DIMETHOXY-BENZENE 0.001-0.01 LF JAD NAP
2-BUTYL-ISOVALERIC-ACID-METHYL- ESTER 2-20 LF JAD NAP	3,4-DIMETHOXY-SUDACHIUTIN LF NAP
CADINENE EO NAP	1,3-DIMETHYL-CYCLOHEXANONE EO NAP
ALPHA-CADINENE EO NAP	3,6-DIMETHYL-6-OXO-OCTANOIC-ACID 0.001-0.01 LF JAD NAP
CAFFEIC-ACID SH NAP	3,6-DIMETHYL-7-OXO-OCTANOIC-ACID 0.001-0.01 LF JAD NAP
CALCIUM 16,200 LF PED	3,6-DIMETHYL-7-OXO-OCTANOIC-ACID- ETHYL-ESTER 0.001-0.01 LF JAD NAP
CAMPHENE 2-25 LF JAD NAP	2,6-DIMETHYL-PYRIDINE LF NAP
CARBOHYDRATES 557,000 LF PED	3,4-DIMETHYL-PSEUDACHITIN LF NAP
ALPHA-CAROTENE	3,4-DIMETHYL-SUDACHITIN LF NAP
BETA-CAROTENE 237 LF PED	DIMETHYL-SULFOXIDE EO NAP
CARVACROL EO NAP	3(5',5'-DIMETHYL-TETRAHYDROFU- RAN-2'-YL)-BUT-CIS-2-EN-1-OL 1.15- 2.26 EO NAP
CARVEOL EO NAP	3(5',5'-DIMETHYL-TETRAHYDROFURAN- 2'-YL)-BUT-CIS-2-EN-1-OL 2.94 EO NAP
CARVEOL-ACETATE EO NAP	DIOSPHENOL 0.01-0.1 LF JAD NAP
CARVONE 4-132 LF USA	DIPENTENE EO NAP
BETA-CARYOPHYLLENE 8-80 LF JAD NAP	DELTA-DODECALACTONE 0.001-0.01 LF JAD NAP
CARYOPHYLLENE-OXIDE EO NAP	EO 1,000-10,000 PL BML GEO JAD
CEDRENE EO NAP	ERIODICTYOL-7-O-RUTINOSIDE 860 LF NAP
CEDROL EO NAP	2-ETHYL-HEXAN-1-OL 0.001-0.01 LF JAD NAP
CHLOROGENIC-ACID SH NAP	5-ETHYL-2-METHYL-PYRIDINE LF NAP
CHOLINE PL 411/	EUGENOL EO NAP
CHROMIUM TR LF PED	EUPATORIN EO NAP
CINEOLE 2-1,200 LF JAD NAP	TRANS-BETA-FARNESENE EO NAP
1,8-CINEOLE 45-1,390 LF BML JAD NAP	FAT 54,000 LF PED
CINEROL EO NAP	FENCHENE EO NAP
CINNAMIC-ACID-METHYL-ESTER EO NAP	FIBER 114,000 LF PED
CITRONELIC-ACID 0.01-0.1 LF JAD NAP	GARDENIN-B LF NAP
CITRONELLOL EO NAP	GARDENIN-D LF NAP
COBALT 93 LF PED	GERANIAL 0.005-0.05 LF JAD NAP
ALPHA-COPAENE EO NAP	GERANIC-ACID 0.01-0.1 LF JAD NAP
BETA-COPAENE EO NAP	GERANIOL-ACETATE 0.1-1 LF JAD NAP
COSMOSIIN SH NAP	
P-COUMARIC-ACID SH NAP	
COUMARIN 0.02-0.2 LF JAD NAP	
O-CRESOL 0.001-0.01 LF JAD NAP	
P-CRESOL 0.002-0.02 LF JAD NAP	
CRYPTONE 0.001-0.01 LF JAD NAP	
CUMIN-ALCOHOL 0.001-0.01 LF JAD NAP	
CYCLOPENTANOL 0.01-0.1 LF JAD NAP	
P-CYMENE 2.5-30 LF BML JAD NAP	
P-CYMOL 4-130 LF JAD NAP	

- GERMACRENE-D EO NAP
 GUAIACOL 0.01-0.1 LF JAD NAP
 ALPHA-GURJUNENE EO NAP
 HEPTAN-3-OL 0.5-5 LF JAD NAP
 HEPTAN-2-ONE 0.001-0.01 LF JAD NAP
 HESPERETIN LF PED
 HEX-TRANS-2-ENOIC-ACID 0.001-0.01 LF JAD NAP
 2-HYDROXY-BENZALDEHYDE 0.003-0.03 LF JAD NAP
 HYDROXY-BOVOLIDE 0.001-0.01 LF JAD NAP
 4-HYDROXY-4-METHYL-CYCLOHEX-2-EN-1-ONE 0.07-0.7 LF JAD NAP
 5-HYDROXY-3',4',6,7-TETRAMETHOXY-FLAVONE LF NAP
 HYMENOXIN LF NAP
 BETA-IONONE 0.3-3 LF JAD NAP
 IRON 600 LF PED
 ISOAMYL-PHENYLACETATE 0.05-0.5 LF JAD NAP
 ISOBUTYRIC-ACID 0.03-0.3 LF JAD NAP
 ISOCHLOROGENIC-ACID SH NAP
 ISOMENTHOL 19-310 LF BML JAD NAP
 ISOMENTHOL-ACETATE 8-80 LF JAD NAP
 ISOMENTHONE 30-1,000 LF JAD NAP
 ISOMENTHYL-ACETATE 40
 (+)-ISOMINTLACTONE 0.03-0.3 LF JAD NAP
 ISOPULEGOL-ACETATE 0.01-0.1 LF JAD NAP
 ISORHOIFOLIN LF PED
 ISOVALERALDEHYDE
 ISOVALERIC-ACID WOI
 ISOVALERIC-ACID-N-OCTYL-ESTER 0.005-0.05 LF JAD NAP
 DELTA-JASMINLACTONE 0.05-0.5 LF JAD NAP
 GAMMA-JASMINLACTONE 0.001-0.01 LF JAD NAP
 JASMONE EO NAP
 KILOCALORIES 3,020 LF PED
 LAVANDULOL 0.001-0.01 LF JAD NAP
 LEDOL PL 411/
 LIMONENE 2-320 LF AYL JAD NAP
 (+)-LIMONENE 160-1,590 LF JAD NAP
 (-)-LIMONENE LF NAP
 LIMONENE-10-OL-ACETATE EO NAP
 LINALOOL 12-120 LF JAD NAP
 LITHOSPERMIC-ACID SH NAP
 LUTEOLIN LF NAP
 LUTEOLIN-7-O-RUTINOSIDE 120 LF NAP
 MAGNESIUM 6,610 LF PED
 MANGANESE 61 LF PED
 P-MENTHANE EO NAP
 P-MENTH-TRANS-2-EN-1-OL EO NAP
 MENTHOFURAN 0-2,200 AYL JAD NAP
 MENTHACUBANONE SH NAP
 MENTHOCUBANONE SH NAP
 MENTHOKUBANONE SH NAP
 MENTHOL 156-6,750 LF JAD NAP
 MENTHONE 20-2,730 BML AYL JAD NAP FT59:465
 MENTHOSIDE LF PED
 MENTHYL-ACETATE 8-5,080 LF JAD NAP
 1-MENTHYL-BETA-D-GLUCOSIDE PL JSG
 MENTHYL-ISOVALERATE 0.01-0.1 LF JAD NAP
 MENTHYL-VALERATE LF NAP
 P-METHOXY-ACETOPHENONE 0.01-0.1 LF JAD NAP
 2-METHYL-BUT-2-EN-1-AL 0.007-0.07 LF JAD NAP
 2-METHYL-BUTYRIC-ACID-METHYL-ESTER 0.004-0.04 LF JAD NAP
 2-METHYL-CINNAMALDEHYDE 0.001-0.01 LF JAD NAP
 3-METHYL-CYCLOHEXANONE 0.4-4 LF JAD NAP
 5-METHYL-HEPTAN-3-ONE 0.001-0.01 LF JAD NAP
 6-METHYL-HEPT-5-EN-2-ONE 0.01-0.1 LF JAD NAP
 6-METHYL-JASMONATE 0.001-0.01 LF JAD NAP
 5-METHYL-2-(2'-OXO-3'-BUTYL)-PHENOL 0.05-3.85 LF JAD NAP
 5-METHYL-2-(3'-OXO-3'-PENTYL)-PHENOL 0.01-0.04 LF JAD NAP
 5-METHYL-2-PHENYL-HEX-2-EN-1-AL 0.003-0.03 LF JAD NAP
 4-METHYL-2-PHENYL-PENT-2-EN-1-AL 0.006-0.06 LF JAD NAP
 (-)-MINTLACTONE 0.3-3 LF JAD NAP
 MYRCENE 1-10 LF BML JAD NAP
 MYRTENAL 0.002-0.02 LF JAD NAP
 MYRTENOL 0.5-5 LF JAD NAP
 NEOISOMENTHOL-ACETATE EO NAP
 NEOISOPULEGOL EEO NAP
 NEOMENTHOL 33-820 LF JAD NAP
 NEOMENTHONE 70-700 LF JAD NAP
 NEOMENTHYL-ACETATE 15-150 LF JAD NAP
 NERAL 0.001-0.01 LF JAD NAP

NEROL TC NAP
 NEROLIDOL 0.05-0.5 LF JAD NAP
 NEVADENSIN LF NAP
 NIACIN 114 LF PED
 NONAN-1-OL 0.001-0.01 LF JAD NAP
 OCIMENE EO NAP
 OCT-TRANS-2-EN-OL 0.001-0.01 LF JAD NAP
 OCTAN-3-OL 4-70 LF JAD NAP
 PECTIN 30,000 SH NAP
 PENTAL-1-OL EO NAP
 PENT-CIS-2-EN-1-OL 0.5-5 LF JAD NAP
 PERILLA-ALCOHOL 0.05-0.5 LF JAD NAP
 PHELLANDRENE 2-20 LF BML JAD NAP
 PHENYLACETIC-ACID 0.001-0.01 LF JAD NAP
 2-PHENYLETHANOL 0.2-2 LF JAD NAP
 2-PHENYLETHANOL-ACETATE 0.05-0.5 LF JAD NAP
 2-PHENYLETHANOL-BUTYRATE 0.05-0.5 LF JAD NAP
 2-PHENYLETHANOL-ISOBUTYRATE 0.05-0.5 LF JAD NAP
 2-PHENYLETHANOL-N-VALERATE 0.4-4 LF JAD NAP
 3-PHENYL-4-PROPYL-PYRIDINE LF NAP
 3-PHENYL-PYRIDINE LF NAP
 PHOSPHORUS 7,720 LF PED
 PINENE 2-23 LF JAD NAP
 ALPHA-PINENE 5-230 LF BML JAD NAP
 (+)-ALPHA-PINENE 14-145 LF JAD NAP
 BETA-PINENE 10-400 LF BML JAD NAP
 PIPERITENONE EO NAP
 CIS-PIPERITOL 0.5-5 LF JAD NAP
 TRANS-PIPERITOL 0.5-5 LF JAD NAP
 PIPERITONE 0-500 LF JAD NAP
 PIPERITONE-OXIDE
 POTASSIUM 22,600 LF PED
 2-PROPYL-5-PHENYL-PYRIDINE LF NAP
 PROTEIN 248,000 LF PED
 PROTEIN 127,000 PL WOI
 PULEGONE 3-6,530 LF JAD NAP
 (+)-PULEGONE 0-440 LF JAD NAP
 PYRIDINE 0.0001-0.001 LF JAD NAP
 RIBOFLAVIN 38.9 LF PED
 CIS-ROSEOXIDE 0.03-0.3 PL JAD NAP
 TRANS-ROSEOXIDE 0.01-0.1 PL JAD NAP
 ROSMARINIC-ACID 700-1,800 SH JAD NAP

ROSMARINIC-ACID 30,000 PL FT62:166
 RUTIN PL 411/
 SABINENE EO NAP
 SABINENE-ACETATE
 SABINENE-HYDRATE 5-110 LF JAD NAP
 CIS-SABINOL 0.001-0.01 LF JAD NAP
 SALVIGENIN EO NAP
 SELENIUM 11 LF PED
 SIDERITOFILAVONE LF NAP
 SILICON TR LF PED
 SODIUM 1,950 LF PED
 TANNIN
 ALPHA-TERPINENE 20 BML
 TERPINEN-4-OL EO NAP
 GAMMA-TERPINENE 2-20 LF JAD NAP
 ALPHA-TERPINEOL EO NAP
 TERPINOLENE LF JAD NAP
 THIAMIN 12.1 LF PED
 ALPHA-THUJONE EO NAP
 BETA-THUJONE EO NAP
 THYMOL EO NAP
 TIN 11 LF PED
 ALPHA-TOCOPHEROL
 GAMMA-TOCOPHEROL
 VANILLIN 0.001-0.01 LF JAD NAP
 VIRIDIFLOROL 1-15 LF JAD NAP
 WATER 851,000 LF PED
 XANTHOMICROL LF NAP
 BETA-YLANGENE EO NAP
 ZINC TR LF PED

MENTHA X ROTUNDIFOLIA (L.) HUDSON

“APPLEMINT”

ALLO-CYMENE 6-100 SH JAD NAP
 APIGENIN SH NAP
 BORNEOL-ACETATE 25-420 LF JAD NAP
 CAFFEIC-ACID SH NAP
 CALCIUM 16,300 LF CRC
 CAMPHENE 0-20 LF JAD NAP
 CARVONE 260-5,000 LF JAD NAP
 (-)-CARVONE 240-4,000 LF JAD NAP
 CINEOLE 4-120 LF JAD NAP
 CITRAL 9-150 SH JAD NAP
 P-COUMARIC-ACID SH NAP
 CYANIDIN SH NAP
 P-CYMENE 14-230 SH JAD NAP
 DELPHINIDIN SH NAP
 DIHYDROCARVONE LF NAP
 DIOSPHENOL LF NAP

DIOSPHENOLENE LF NAP
 EO 600-10,000 LF GEO
 1,2-EPOXY-(1S,2S,3R,4S)-MENTHOL-
 ACETATE SH NAP
 1,2-EPOXY-NEOMENTHOL-ACETATE
 6-7,390 LF NAP
 FAT 282,000 SD
 FERULIC-ACID SH NAP
 ISONEOPULEGOL 1-5,200 LF JAD NAP
 ISONEOPULEGOL-ACETATE 43-720 LF
 JAD NAP
 ISOPIPERITENONE 80-1,340 LF JAD
 NAP
 LIMONENE 14-500 LF JAD NAP WOI
 (-)-LIMONENE LF NAP
 LUTEOLIN SH NAP
 LUTEOLINIDIN SH NAP
 MASLINIC-ACID TC NAP
 MENTHOFURAN LF NAP
 MENTHONE 0-TR LF NAP
 MENTHOL 0-80 LF JAD NAP
 NEOISOPULEGOL 314-5,230 LF JAD
 NAP
 OCTAN-3-OL 5-822 LF JAD NAP
 OCTAN-3-OL-ACETATE LF NAP
 OLEANOLIC-ACID TC NAP
 PELARGONIDIN SH NAP
 PETUNIDIN SH NAP
 ALPHA-PHELLANDRENE 16-280 LF JAD
 NAP
 ALPHA-PINENE 4-430 LF JAD NAP
 BETA-PINENE 9-330 LF JAD NAP
 PIPERITENONE 50-860 LF JAD NAP
 PIPERITENONE-OXIDE 306-8,730 LF
 JAD NAP WOI
 (+)-PIPERITENONE-OXIDE 8-8,510 LF
 JAD NAP
 PIPERITONE 44-730 LF JAD NAP
 PIPERITONE-OXIDE 40-6,020 LF JAD
 NAP
 POMOLIC-ACID TC NAP
 POTASSIUM 17,100 LF CRC
 PROTEIN 144,000 LF
 PROTEIN 196,000 SD
 PULEGONE 580-9,720 LF JAD NAP
 (+)-PULEGONE TR-170 LF JAD NAP
 ROSMARINIC-ACID 3,600 LF NAP
 ROSMARINIC-ACID 32,000 PL
 FT62:166
 ROTUNDIFOLONE PL JSG
 SODIUM 2,520 LF CRC
 THUJONE 20-360 LF JAD NAP
 URSOLIC-ACID TC NAP

MENYANTHES TRIFOLIATA L.

“BUCKBEAN; BOGBEAN”

ASCORBIC-ACID 2,047 LF HHB WOI
 BENZYL-ALCOHOL LF CCO
 BETULIN RT HHB
 BETULINIC-ACID 1,000-8,000 RT
 HHB
 CAFFEIC-ACID LF HHB
 BETA-CAROTENE LF HHB
 CATECHIN-TANNINS LF HHB
 CERYL-ALCOHOL LF HHB
 CHLOROGENIC-ACID LF HHB
 CHOLINE LF HHB
 7',8'-DIHYDROFOLIAMENTHIN LF
 HHB
 EO 670-700 LF HHB WOI
 FERULIC-ACID LF HHB
 FOLIAMENTHIN LF HHB
 FOLIC-ACID LF HHB
 GENTIALUTINE LF HHB
 GENTIANIDINE LF HHB
 GENTIANINE LF HHB
 GENTIATIBETINE LF HHB
 HYPERIN LF HHB
 HYPEROSIDE PL JSG
 INULIN RT HHB
 KAEMPFEROL-3-GALACTOSIDE PL
 WOI
 LOGANIN LF RT HHB CCO
 LUPEOL RT HHB
 MELIATIN PL WOI
 MENTHIAFOLIN LF HHB
 MENYANTHIN LF HHB
 PECTIN RT HHB
 PENTOSANS RT HHB
 PHENETHYL-ALCOHOL LF CCO
 PHLOBAPHENE LF HHB
 PHYTOSTEROLS LF HHB
 PROTOCATECHUIC-ACID LF HHB
 QUERCETIN-3-GALACTOSIDE PL
 WOI
 RUTIN LF HHB
 SAPONIN LF HHB
 SCOPOLETIN PL 411/
 SECOLOGANIN PL CCO
 SINAPIC-ACID PL 411/
 ALPHA-SPINASTEROL RT HHB
 SWEROSIDE
 TANNIN 30,000 PL WOI
 TRIFOLIOSIDE LF HHB
 VANILLIC-ACID PL 411/

MERCURIALIS ANNUA L.

"ANNUAL MERCURY"

CYANOGENIC-GLUCOSIDES 13,500 RT
 JU HHB
 EO 800 RT CRC
 ETHYLAMINE PL HHB
 FAT 1,200 RT CRC
 GLUCOSE PL HHB
 HERMIDINE PL HHB
 ISOAMYLAMINE PL HHB
 ISOBUTYLAMINE PL HHB
 ISORHAMNETIN? PL HHB
 MALTOSE 14,900 RT HHB
 MERCURIALIN RT HHB
 METHYLAMINE SD CRC
 MUCILAGE 28,000 RT HHB
 NARCISSIN PL HHB
 PROPYLAMINE PL HHB
 RHAMNOSE PL HHB
 RUTIN PL HHB
 SAPONINS 18,000-22,500 RT CRC HHB
 SIO2 PL HHB
 TANNIN 33,500 RT CRC
 XYLOSE PL HHB

*METHYSTICHODENDRON**AMESIANUM R. E. SCHULTES*

"CULEBRA"

ALKALOIDS 3,000 LF CRC
 ALKALOIDS 3,000 ST CRC
 ATROPINE PL CRC
 SCOPOLAMINE PL CRC

MIMOSA HOSTILIS BENTH.

"JUREMA"

"YUREMA"

ASH 34,400 PL CRC
 CARBOHYDRATES 654,600 PL CRC
 N,N-DIMETHYLTRYPTAMINE PL CRC
 FAT 30,800 PL CRC
 FIBER 118,300 PL CRC
 NIGERINE PL CRC
 PROTEIN 161,000 PL CRC

MIMOSA PUDICA L.

"SENSITIVE PLANT"

ASCORBIC-ACID 180-2,570 LF CRC
 ASH 5,000-71,000 LF CRC

ASH 36,000-54,000 SD CRC
 CALCIUM 350-23,800 LF CRC
 CARBOHYDRATES 51,000-689,000 LF
 HHB
 BETA-CAROTENE 65-930 LF CRC
 CROCETIN PL HHB
 CROCETIN-DIMETHYL-ETHER LF WOI
 FAT 0-32,000 LF CRC HHB
 FAT 24,000-170,000 SD CRC HHB
 FIBER 82,000-327,000 LF CRC
 D-GLUCURONIC-ACID SD HHB
 IRON 14 LF CRC
 KILOCALORIES 220-3,140 LF CRC
 LINOLEIC-ACID 12,240-86,700 SD CRC
 HHB
 LINOLENIC-ACID 100-680 SD CRC HHB
 MIMOSINE PL JFM
 MUCILAGE SD HHB
 NOREPINEPHRINE PL 499/
 OLEIC-ACID 7,440-52,700 SD CRC
 HHB
 PALMITIC-ACID 2,090-14,790 SD CRC
 HHB
 PHOSPHORUS 530-1,700 LF CRC
 POTASSIUM 11,400 LF CRC
 PROTEIN 14,000-219,000 LF CRC
 PROTEIN 116,000-304,000 SD CRC
 RIBOFLAVIN 0.5-7 LF CRC
 SITOSTEROL SD HHB
 STEARIC-ACID 2,135-15,130 SD CRC
 HHB
 TANNIN 100,000 RT WOI
 THIAMIN 1.2-17 LF CRC
 WATER 749,000-930,000 LF CRC
 D-XYLOSE SD HHB

MIMULUS GLABRATUS HBK.

"HUACA-MULLO"

ASCORBIC-ACID 220-2,200 SH PAN
 ASH 15,000-150,000 SH PAN
 CALCIUM 5,430-54,300 SH PAN
 CARBOHYDRATES 51,000-510,000 SH
 PAN
 BETA-CAROTENE 32-326 SH PAN
 FAT 8,000-80,000 SH PAN
 FIBER 12,000-120,000 SH PAN
 IRON 66-660 SH PAN
 KILOCALORIES 310-3,100 SH PAN
 NIACIN 9-92 SH PAN
 PHOSPHORUS 520-5,200 SH PAN
 PROTEIN 25,000-250,000 SH PAN
 RIBOFLAVIN 2-20 SH PAN

THIAMIN 0.8-8 SH PAN
WATER 900,000 SH PAN

MIRABILIS EXPANSA R. & P.

"MISO"

"TAZO"

ASH 7,000-42,000 RT PAN
CARBOHYDRATES 158,000-869,800 RT
PAN
FAT 2,500-27,000 RT PAN
FIBER 4,000-21,000 RT PAN
PROTEIN 11,000-68,500 RT PAN
WATER 650,000-815,000 RT PAN

MITRAGYNE SPECIOSA KORTH.

"KRATUM"

AJMALICINE LF ALK
CORYNANTHEIDALINE LF PC30:347
CORYNANTHEIDINE LF ALK
3-DEHYDROMITRAGYNINE 36 LF
PC25:2911
(-)-EPICATECHIN 150 LF PC25:2910
ISOMITRAFOLINE PL CRC
ISOMITRAPHYLLINE LF ALK
ISOSPECIOFOLINE PL CRC
MITRACILIATINE 32 LF PC25:2911
MITRAGYNALINE LF PC30:347
MITRAGYNINE 86 LF PC25:2911
MITRAGYNOL PL ALK
MITRAPHYLLINE LF ALK
MITRASPECINE SD ALK
MITRAVERSINE PL CRC
PAYNANTHEINE 50 LF PC25:2911
RHYNCHOPHYLLINE LF ALK
ROTUNDIFOLINE PL ALK
SPECIOCILIATINE 30 LF PC25:2911
SPECIOFOLINE LF ALK
SPECIOGYNINE 44 LF PC25:2911
SPECIOPHYLLINE LF ALK
STIPULATINE LF ALK
UNCARINE-D PL JSG

MOLDAVICA PARVIFLORA
(NUTT.) BRITT.

"SMALL-FLOWERED MOLDAVICA"

BICYCLOGERMACRENE 15 PL BML
CARYOPHYLLENE 50 PL BML
EO 1,000 PL BML
GERMACRENE-D 310 PL BML
MYRCENE 160 PL BML

MOLDAVICA THYMIFLORA

RYDB.

"THYME-FLOWERED MOLDAVICA"

1,8-CINEOLE 134 PL BML
CARYOPHYLLENE 250 PL BML
CARYOPHYLLENE-OXIDE 46 PL BML
BETA-ELEMENE 148 PL BML
EO 2,000 PL BML
GERMACRENE-D 140 PL BML
ISOMENTHONE 216 PL BML
LIMONENE 10 PL BML
LINALOOL 32 PL BML
MENTHONE 28 PL BML
MYRCENE 20 PL BML
CIS-OCIMENE 84 PL BML
TRANS-OCIMENE 96 PL BML
ALPHA-PINENE 2 PL BML
BETA-PINENE 2 PL BML
PULEGONE 280 PL BML
SABINENE 8 PL BML
ALPHA-TERPINEOL 48 PL BML

MOMORDICA CHARANTIA L.

"BITTER MELON"

"SOROSI"

ALKALOIDS 380 FR IFP 1/
ASCORBIC-ACID 570-36,447 FR CRC
ASCORBIC-ACID 1,700-12,412 LF CRC
ASCORBIGEN FR WOI
ASH 4,000-142,000 FR CRC IFP
ASH 21,000-149,000 LF CRC
CALCIUM 130-4,333 FR CRC
CALCIUM 2,640-18,701 LF CRC
CARBOHYDRATES 47,000-763,000 FR
CRC
CARBOHYDRATES 70,000-618,000 LF
CRC
BETA-CAROTENE TR-18 FR CRC
BETA-CAROTENE 51-330 LF CRC
CHARANTIN 1,500 FR IFP
CHOLESTEROL FR MPI
CITRULLINE FR IFP
COPPER 30 FR MPI
CRYPTOXANTHIN FR IFP
DIOSGENIN TC MPI
ALPHA-ELAEOSTEARIC-ACID 4,670-
231,632 SD WOI
ELASTEROL PL JSG
FAT 2,000-60,000 FR CRC
FAT 4,000-39,000 LF CRC
FAT 10,000-496,000 SD CRC

FIBER 10,000-257,800 FR CRC IFP
 FIBER 5,000-104,000 LF CRC
 FLAVOCHROME FR IFP
 FLUORIDE 0.2-0.5 FR MPI
 FLUORINE 4.8 FR MPI
 GALACTOURONIC-ACID FR MPI
 GAMMA-AMINO-BUTYRIC-ACID FR IFP
 5-HYDROXYTRYPTAMINE FR MPI
 IODINE 0.41 FR MPI
 IRON 2-560 FR CRC
 IRON 50-357 LF CRC
 KILOCALORIES 190-3,290 FR CRC
 KILOCALORIES 440-3,020 LF CRC
 LANOSTEROL FR MPI
 LEAD 5 FR MPI
 LINOLEIC-ACID 770-38,192 SD WOI
 LUTEIN FR IFP
 LYCOPENE FR IFP
 LYCOPENE FR IFP
 MAGNESIUM 195-3,800 FR MPI
 MANGANESE 10 FR MPI
 MOMORDICIN FR IFP
 MOMORDICOSIDE-A SD CCO
 MOMORDICOSIDE-B SD CCO
 MOMORDICOSIDE-C SD CCO
 MOMORDICOSIDE-D SD CCO
 MOMORDICOSIDE-E SD CCO
 MOMORDICOSIDE-F-1 FR IFP
 MOMORDICOSIDE-F-2 FR IFP
 MOMORDICOSIDE-G FR IFP
 MOMORDICOSIDE-I FR IFP
 MOMORDICOSIDE-K SD CCO
 MOMORDICOSIDE-L SD CCO
 MUTACHROME FR IFP
 NIACIN 3-50 FR CRC
 NIACIN 15-103 LF CRC
 NICKEL 10 FR MPI
 NITROGEN 33,800 FR MPI
 OLEIC-ACID 1,580-77,376 SD WOI
 OXALATE 185-1,444 FR MPI
 OXALIC-ACID 5 FR WBB
 PECTIN FR IFP
 PEROXIDASE FR IFP
 PHOSPHORUS 320-8,333 FR CRC
 PHOSPHORUS 540-33,467 LF CRC
 PHYTOFLUENE TR SD IFP 1/
 PIPECOLIC-ACID FR IFP
 POLYPEPTIDE-P FR CCO
 POTASSIUM 2,700-45,000 FR CRC
 POTASSIUM 5,100-33,117 LF CRC
 PROTEIN 9,000-181,000 FR CRC IFP
 PROTEIN 51,000-371,000 LF CRC
 RIBOFLAVIN 0.4-9 FR CRC

RIBOFLAVIN 4.6-31 LF CRC
 RUBIXANTHIN FR IFP
 BETA-SITOSTEROL FR IFP
 BETA-SITOSTEROL-D-GLUCOSIDE FR IFP
 SODIUM 20-333 FR CRC
 SODIUM 190-1,234 LF CRC
 STEARIC-ACID 29,800-147,800 SD WOI
 STIGMASTEROL FR MPI
 STIGMASTA-5,25-DIEN-3-beta-OL PL IFP
 5-ALPHA-STIGMASTA-7,25-DIEN-3-BETA-OL PL JSG
 5-ALPHA-STIGMASTA-7,22,25-TRIEN-3-BETA-OL PL JSG
 SUGARS 35,000-45,000 FR IFP
 THIAMIN 0.2-12 FR CRC
 THIAMIN 1.3-8 LF CRC
 TITANIUM 100 FR MPI
 UREASE SD WOI
 VICINE SD CCO
 WATER 795,000-934,000 FR CRC IFP
 WATER 801,000-846,000 LF WOI
 ZEAXANTHIN FR IFP 1/
 ZEINOXANTHIN FR IFP 1/

1/IFP=INDIAN FOOD PACKER MAR/APR 1988

MONARDA CITRIODORA CERV.

"LEMON MINT" GEO

BORNYL-ACETATE 48-185 PL BML
 CAMPHENE 6-25 PL BML
 CARVACROL 316 PL BML
 1,8-CINEOLE 85-614 PL BML
 CITRAL
 P-CYMELE 859-1,038 PL BML
 DIHYDROCARVEOL-ACETATE 11 PL BML
 EO 10,000 SH GEO
 ISOMENTHONE 34 PL BML
 LIMONENE 89-90 PL BML
 LINALOOL 47 PL BML
 LINALYL-ACETATE 24 PL BML
 MYRCENE 14 PL BML
 3-OCTANOL 124-201 PL BML
 3-OCTYL-ACETATE 26-97 PL BML
 ALPHA-PINENE 25-214 PL BML
 BETA-SITOSTEROL PL HHB
 GAMMA-TERPINENE 29 PL BML
 ALPHA-TERPINEOL 11 PL BML
 THYMOHYDROQUINONE PL GEO
 THYMOL 6,269-8,337 PL BML
 TRIACONTANE SH HHB

MONARDA CLINOPODIA L.**"CLINOPOD BERGAMOT"**

BORNYL-ACETATE 614 PL BML
 CAMPHENE 88 PL BML
 1,8-CINEOLE 1,383 PL BML
 P-CYMENE 218 PL BML
 DIHYDROCARVEOL-ACETATE 348 PL BML
 EO 10,000 PL ///
 LIMONENE 287 PL BML
 LINALOOL 216 PL BML
 LINALYL-ACETATE 4,050 PL BML
 MYRCENE 10 PL BML
 3-OCTANOL 663 PL BML
 3-OCTYL-ACETATE 333 PL BML
 ALPHA-PINENE 65 PL BML
 PULEGONE 121 PL BML
 GAMMA-TERPINENE 140 PL BML
 ALPHA-TERPINEOL 434 PL BML

///=Assumed EO content; GEO gives 10,000
 for another *Monarda*

MONARDA DIDYMA L.**"BEEBALM"****"OSWEGO TEA"**

BORNEOL 7 FL FFJ6:80
 BORNEOL 40-75 LF FFJ6:80
 BORNYL-ACETATE 55 FL FFJ6:80
 BORNYL-ACETATE 380-740 LF FFJ6:80 HHB
 BORNYL-ACETATE 15-775 PL BML
 BETA-BOURBONENE 10 FL FFJ6:80
 BETA-BOURBONENE 50-90 LF FFJ6:80 HHB
 BETA-BOURBONENE 5-70 PL BML
 CAMPHENE 10 FL FFJ6:80
 CAMPHENE 90-170 LF FFJ6:80 HHB
 CAMPHENE 25-320 PL BML
 DELTA-3-CARENE LF HHB
 CARVACROL PL HHB
 BETA-CARYOPHYLLENE 30 FL FFJ6:80
 BETA-CARYOPHYLLENE TR LF FFJ6:80
 1,8-CINEOLE 22 FL FFJ6:80
 1,8-CINEOLE 30-50 LF FFJ6:80 HHB
 1,8-CINEOLE 100-2,735 PL BML
 ALPHA-COPAENE TR FL FFJ6:80
 ALPHA-COPAENE TR LF FFJ6:80
 BETA-COPAENE 5-40 PL BML
 P-CYMENE 405 FL FFJ6:80
 P-CYMENE 140-270 LF FFJ6:80 HHB

P-CYMENE 120-1,850 PL BML
 DIDYMIN 300-3,000 PL HHB
 DIHYDROCARVYL-ACETATE 5-45 PL BML
 EO 3,700 FL FFJ6:80
 EO 7,000-13,000 LF HHB FFJ6:80
 EO 1,000-10,000 SH BML HHB
 GENKWANIN PL HHB
 GERANIOL 4 FL FFJ6:80
 GERANIOL 14-25 LF FFJ6:80 HHB
 GERANYL-ACETATE 4 FL FFJ6:80
 GERANYL-ACETATE 7-13 LF FFJ6:80 HHB
 GERMACRENE-D 115 FL FFJ6:80
 GERMACRENE-D 370-690 LF FFJ6:80 HHB
 GERMACRENE-D 20-330 PL BML
 GLUCOGENKWANIN PL HHB
 ISOMENTHONE TR FL FFJ6:80
 ISOMENTHONE 15-25 LF FFJ6:80 HHB
 ISOSAKURANETIN PL BML
 ISOSAKURANETIN-GLYCOSIDE PL BML
 ISOSAKURANIN PL BML
 LIMONENE 10 FL FFJ6:80
 LIMONENE 25-40 LF FFJ6:80 HHB
 LIMONENE 2-1,300 PL BML
 LINALOOL 2,385 FL FFJ6:80
 LINALOOL 5,195-9,645 LF FFJ6:80 HHB
 LINALOOL 5-5,900 PL BML
 LINALYL-ACETATE 4 FL FFJ6:80
 LINALYL-ACETATE TR LF FFJ6:80
 LINALYL-ACETATE 50-505 PL BML
 LINARIN PL HHB
 MONARDEIN FL HHB
 MYRCENE 30 FL FFJ6:80
 MYRCENE 25-40 LF FFJ6:80 HHB
 MYRCENE 10-485 PL BML
 NARINGENIN PL HHB
 NARIRUTIN PL HHB
 NONANAL 5-50 PL BML
 OCIMENE LF HHB
 OCTAN-3-OL TR LF FFJ6:80
 OCTAN-3-OL TR FL FFJ6:80
 3-OCTANOL 25-240 PL BML
 3-OCTANONE 5-40 PL BML
 OCT-1-ENE-3-OL 10 FL FFJ6:80
 OCT-1-ENE-3-OL 200-360 LF FFJ6:80 HHB
 1-OCTEN-3-OL 30-310 PL BML
 3-OCTYL-ACETATE 10-110 PL BML
 PHAEOPHYTIN LF HHB
 ALPHA-PINENE 18 FL FFJ6:80
 ALPHA-PINENE 50-90 LF FFJ6:80 HHB

ALPHA-PINENE 5-350 PL BML
 BETA-PINENE 7 FL FFJ6:80
 BETA-PINENE 45-80 LF FFJ6:80 HHB
 BETA-PINENE 25-240 PL BML
 PRUNIN PL HHB
 PULEGONE 10-120 PL BML
 ROSMARINIC-ACID 18,000 FL APF48:103
 SABINENE 18 FL FFJ6:80
 SABINENE 100-180 LF FFJ6:80 HHB
 SABINENE 35-1,230 PL BML
 T-SABINENE-HYDRATE 4 FL FFJ6:80
 T-SABINENE-HYDRATE TR LF FFJ6:80
 BETA-SITOSTEROL LF HHB
 ALPHA-TERPINENE 25 FL FFJ6:80
 ALPHA-TERPINENE 10-15 LF FFJ6:80
 HHB
 ALPHA-TERPINENE 5-40 PL BML
 GAMMA-TERPINENE 195 FL FFJ6:80
 GAMMA-TERPINENE 60-115 LF FFJ6:80
 HHB
 GAMMA-TERPINENE 20-1,250 PL BML
 ALPHA-TERPINEOL 20 FL FFJ6:80
 ALPHA-TERPINEOL 25-40 LF FFJ6:80
 HHB
 ALPHA-TERPINEOL 1-420 PL BML
 TERPINOLENE 4 FL FFJ6:80
 TERPINOLENE 10-15 LF FFJ6:80 HHB
 TERPINOLENE 15-160 PL BML
 ALPHA-THUJENE 2-20 PL BML
 THYMOL 5-50 PL BML
 THYMOL-METHYL-ETHER 50-520 PL
 BML
 URSOLIC-ACID LF HHB

MONARDA FISTULOSA L. L.

“WILD BERGAMOT” GEO

ACETIC-ACID EO GEO
 BORNYL-ACETATE 1-1,085 PL BML
 BETA-BOURBONENE 1-62 PL BML
 N-BUTYRALDEHYDE EO HHB
 BUTYRIC-ACID EO GEO
 CAMPHENE 1-856 PL BML
 CAPROIC-ACID EO GEO
 DELTA-3-CARENE 1-93 PL BML
 CARVACROL 93-19,902 PL BML
 CARVACRYL-METHYL-ETHER 6-6,076
 PL BML
 1,8-CINEOLE 3-5,006 PL BML
 COPAENE 1-124 PL BML
 CUMINALDEHYDE 1-62 PL BML
 P-CYMENE 3-15,810 PL BML
 P-CYMEN-8-OL 1-124 PL BML

DIHYDROCARVYL-ACETATE 3-301 PL
 BML
 DIHYDROCUMINYL-ALCOHOL EO GEO
 DIHYDROXYTHYMOQUINONE EO GEO
 EO 3,000-31,000 PL GEO
 3,4-EPOXY-GAMMA-TERPINENE 3-186
 PL BML
 FORMALDEHYDE EO HHB
 GERANIAL 15-837 PL BML
 GERANIOL 1-29,450 PL BML
 GERMACRENE-D 9-1,891 PL BML
 CIS-3-HEXENOL 1-31 PL BML
 ISOMENTHONE 12-146 PL BML
 ISOVALERALDEHYDE EO HHB
 LIMONENE 3-589 PL BML
 LINALOOL 15-341 PL BML
 MYRCENE 3-1,860 PL BML
 NERAL 24-589 PL BML
 NEROL 15-310 PL BML
 3-OCTANOL 46-1,655 PL BML
 3-OCTANONE 1-93 PL BML
 1-OCTEN-3-OL 1-2,294 PL BML
 3-OCTYL-ACETATE 21-211 PL BML
 PERILLALCOHOL EO HHB
 ALPHA-PINENE 3-1,823 PL BML
 BETA-PINENE 3-93 PL BML
 PULEGONE 12-257 PL BML
 ROSMARINIC-ACID 20,000 SH
 APF48:103
 SABINENE 1-93 PL BML
 CIS-SABINENE-HYDRATE 1-527 PL
 BML
 TRANS-SABINENE-HYDRATE 1-217 PL
 BML
 ALPHA-TERPINENE 3-3,193 PL BML
 GAMMA-TERPINENE 3-11,377 PL BML
 ALPHA-TERPINEOL 9-3,314 PL BML
 ALPHA-THUJENE 3-2,480 PL BML
 THYMOHYDROQUINONE EO HHB
 THYMOL 1-20,850 PL BML
 THYMOQUINONE EO HHB
 VALERIC-ACID EO GEO

Aggregates data from several books & vars.

MONARDA LINDHEIMERI ENGL.
 & GRAY

“LINDHEIMER’S MONARDA”

BORNYL-ACETATE 62 PL BML
 CAMPHENE 21 PL BML
 CARVACROL 7,024 PL BML
 1,8-CINEOLE 478 PL BML
 P-CYMENE 1,315 PL BML

DIHYDROCARVEOL-ACETATE 16 PL
BML

EO 10,000 PL ///

ISOMENTHONE 18 PL BML

LIMONENE 94 PL BML

MYRCENE 16 PL BML

3-OCTANOL 93 PL BML

3-OCTYL-ACETATE 10 PL BML

ALPHA-PINENE 211 PL BML

GAMMA-TERPINENE 26 PL BML

ALPHA-TERPINEOL 31 PL BML

///=Assumed EO content; GEO gives 10,000
for another Monarda

MONARDA MEDIA WILLD.

"MEAN MONARDA"

BORNYL-ACETATE 161-176 PL BML

CAMPHENE 15-231 PL BML

CARVACROL 2,736 PL BML

1,8-CINEOLE 807-1,351 PL BML

P-CYMENE 14-528 PL BML

DIHYDROCARVEOL-ACETATE 50 PL
BML

EO 7,000 PL BML

GERMACRENE-D 392 PL BML

LIMONENE 236-1,484 PL BML

LINALOOL 22-63 PL BML

LINALYL-ACETATE 69 PL BML

MYRCENE 140 PL BML

CIS-OCIMENE 63 PL BML

TRANS-OCIMENE 336 PL BML

3-OCTANOL 28-292 PL BML

1-OCTEN-3-OL 175 PL BML

3-OCTYL-ACETATE 50 PL BML

ALPHA-PINENE 137-434 PL BML

SABINENE 1,442 PL BML

GAMMA-TERPINENE 46 PL BML

ALPHA-TERPINEOL 35-196 PL BML

THYMOL 1,292 PL BML

///=Assumed EO content; GEO gives 10,000
for another Monarda

MONARDA PUNCTATA L.

"HORSEMINT"

BORNYL-ACETATE 30-3399 PL BML
HHB

CAMPHENE 10-1,080 PL BML HHB

CARVACROL 4,169-12,507 PL BML

1,8-CINEOLE 373-6,864 PL BML

P-CYMENE 65-3,384 PL BML

DIHYDROCARVYL-ACETATE 32-4,518
PL BML

EO 10,000-30,000 PL BML HHB

FAT 313,000 SD CRC

FORMALDEHYDE EO HHB

GERANYL-FORMIATE 1,020-3,060 PL
HHB

HEPTANAL 480-1,440 EO HHB

ISOMENTHONE 24-243 PL BML

ISOVALERALDEHYDE PL BML

LIMONENE 50-2,874 PL BML

LINALOOL PL BML

LINALYL-ACETATE 49-378 PL BML

LINOLEIC-ACID SD HHB

LINOLENIC-ACID SD HHB

2-METHYL-2-HEPTANONE PL HHB

NERAL PL HHB

NERYL-FORMIATE PL HHB

NONANAL PL HHB

NONYL-ACETATE PL HHB

3-OCTANOL 25-801 PL BML

3-OCTYL-ACETATE 34-825 PL BML

OLEIC-ACID SD HHB

ALPHA-PINENE 40-1,974 PL BML

BETA-PINENE 10-990 PL BML

PROTEIN 213,000 SD CRC

PULEGONE 10-267 PL BML

SABINENE PL BML

TERPINEN-4-OL 40-150 PL BML

ALPHA-TERPINENE 550-1,740 PL BML

GAMMA-TERPINENE 11-5,610 PL BML

ALPHA-TERPINEOL 8-4,518 PL BML

ALPHA-THUJENE 220-720 PL BML

THYMOL 2,000-27,633 PL BML

THYMOLHYDROQUINONE EO HHB

THYMOL-METHYL-ETHER EO HHB

UNDECANAL PL HHB

Takes highs and lows for EO and several
varieties in BML

MONARDA RUSSELIANA NUTT.

EX SIMS

"RUSSEL'S MONARDA"

CARVACROL 528 PL BML

1,8-CINEOLE 325 PL BML

P-CYMENE 923 PL BML

EO 10,000 PL ///

GERANIAL 470 PL BML

ISOMENTHONE 207 PL BML

LIMONENE 104 PL BML

LINALOOL 150 PL BML

LINALYL-ACETATE 557 PL BML
 NERAL 54 PL BML
 3-OCTANOL 1,498 PL BML
 3-OCTYL-ACETATE 461 PL BML
 ALPHA-PINENE 14 PL BML
 PULEGONE 499 PL BML
 ALPHA-TERPINEOL 1,802 PL BML
 THYMOL 1,752 PL BML

///=Assumed EO content; GEO gives 10,000
 for another Monarda

MONTANOA TOMENTOSA LLAVE & LEX.

"MONTANOA"

BORNEOL-ACETATE PL PM53:495
 BETA-CARYOPHYLLENE
 PL PM53:495
 BETA-CUBEBENE PL PM53:495
 8ALPHA-HYDROXY-9BETA-
 SENICIOLOXY—TRANS-
 GERMA...DIENOLIDE PL JSG
 9BETA-HYDROXY-8ALPHA-
 SENICIOLOXY—TRANS-
 GERMA...DIENOLIDE PL JSG
 (-)-KAUR-9(11),16-DIEN-19-OIC-ACID PL
 JSG
 KAURENE PL HHB
 KAURENOIC-ACID PL JSG
 MONOGINOIC-ACID PL
 JRM26:525
 MONOGINOL PL JRM26:525
 MONTAGNAEIN PL HHB
 MONTANOL PL JSG
 PRETOMENTOL PL JSG
 PRETOMEXANTOL PL JSG
 PREZOAPATANOL PL JSG
 TOMETANOL LF PC25:2567
 TOMETOL PL JSG
 TOMETOSIN PL HHB
 TOMEXANTHIN LF PC25:2567
 TOMEXANTHOL PL JSG
 ZOAPATLIN RT HHB
 ZOAPATANOL PL JSG
 ZOAPATANOLIDES PL JSG

MORINDA CITRIFOLIA L.

"INDIAN MULBERRY"

ACACETIN-7-O-BETA-D(+)-
 GLUCOPYRANOSIDE FL MPI
 ALIZARIN PL JFM

ALIZARIN-ALPHA-METHYL-ETHER PL
 WOI
 ANTHRAGALLOL-2,3-DIMETHYLETHER
 WD MPI
 ANTHRAQUINONES 4,000 RT HHB
 ASCORBIC-ACID 520-2,320 LF CRC
 ASH 15,000-67,000 LF CRC
 ASPERULOSIDE RT HHB
 CALCIUM 360-1,600 LF CRC
 CARBOHYDRATES 86,000-384,000 LF
 CRC
 BETA-CAROTENE 362-1,615 LF CRC
 DAMNACANTHAL TC JFM
 5,7-DIMETHYL-APIGENIN-4'-O-BETA-
 D(+)-GALACTOPYRANOSIDE FL MPI
 6,8-DIMETHOXY-3-
 METHYLANTHRAQUINONE-1-O-
 BETA-RHAMNOSYL-
 GLUCOPYRANOSIDE FL MPI
 FAT 78,000-348,200 LF CRC
 FIBER 40,000-178,570 LF CRC
 HEXOIC-ACID FR JFM
 IRON 23-100 LF CRC
 KILOCALORIES 1,070-4,775 LF CRC
 LUCIDIN TC PM1975:214
 LUCIDIN-3-PRIMEVEROSIDE TC
 PC20:1693
 MORINDADIOL
 MORINDIN RT WOI
 MORINDONE PL JFM
 MORINDONE-6BETA-PRIMEVEROSIDE
 TC PC20:1693
 NIACIN 72-321 LF CRC
 NORDAMNACANTHAL 17,000 RT
 HHB
 OCTOIC-ACID FR JFM
 PARAFFIN FR WOI
 PHOSPHORUS 150-670 LF CRC
 PROTEIN 45,000-200,890 LF CRC
 RIBOFLAVIN 0.9-4 LF CRC
 RUBIADIN-1-METHYL-ETHER RT
 WOI
 RUBICHLORIC-ACID RT WOIG
 SORANJIDOL RT HHB
 THIAMIN 1.6-7 LF CRC
 TRIHYDROXYMETHYLANTHRA-
 QUINONE-MONOMETHYLETHER RT
 HHB
 WATER 776,000 LF CRC

NOTE: CRC values quite high for fat and
 beta-carotene, fresh leaves reportedly with
 36 mg beta-carotene/100 g.

MORINDA SP

"MORINDA"

ARSENIC 0.26 RT CAL
 CALCIUM 10,000 RT CAL
 COPPER 6-7 RT CAL
 IRON 320 RT CAL
 MAGNESIUM 1,200 RT CAL
 MANGANESE 520 RT CAL
 POTASSIUM 5,660 RT CAL
 SODIUM 206 RT CAL
 ZINC 15 RT CAL

The *Morinda officinalis* figured in CCO
 looks like a vine.

MORUS ALBA L.

"WHITE MULBERRY; SANG-PAI-PI"

ACETIC-ACID LF WOI
 ACETONE LF WOI
 ADENINE LF CCO
 ALBAFURAN-C PL JSG
 ALBANIN-F PL JSG
 ALBANIN-G PL JSG
 ALBANOL-A PL JSG
 ALBANOL-B PL JSG
 ALUMINUM(AL₂O₃) 8,000-18,000 LF
 WOI
 ALPHA-AMYRIN RT BK CCO
 BETA-AMYRIN RT BK CCO
 ARACHIDONIC-ACID SD HHB
 ARSENIC 0.10 RT BK CAL
 ASCORBIC-ACID 50-1,040 FR CRC
 ASCORBIC-ACID 2,000-3,000 LF WOI
 ASH 80,000-204,000 LF CRC WOI
 ASH 7,000-72,000 FR CRC
 ASPARAGIC-ACID LF HHB
 ASTRAGALIN LF RAA
 BENZALDEHYDE PL RAA
 BETULINIC-ACID BK HHB
 BIOTIN LF HHB
 N-BUTANOL LF WOI
 BUTYL-ALCOHOL PL RAA
 BUTYLAMINE LF WOI
 N-BUTYRALDEHYDE LF HHB
 CAFFEIC-ACID PL JLS58:117
 CALCIUM 7,000-27,400 LF CRC WOI
 CALCIUM 300-6,400 FR CRC
 CALCIUM 16,100-16,500 RT BK CAL
 SMO
 CALCIUM(CAO) 14,000-24,000 LF WOI
 CALCIUM-MALATE LF WOI

CAMPESTEROL PL RAA
 CAPROIC-ACID PL RAA
 CARBOHYDRATES 400,000-633,000 LF
 CRC RAA
 CARBOHYDRATES 97,000-813,000 FR
 CRC
 BETA-CAROTENE 1-8 FR CRC
 CELLULOSE 86,000-106,000 LF RAA
 CHALCOMORACIN RT RAA
 CHLOROGENIC-ACID LF RAA
 CHOLINE LF CCO
 CHRYSANTHEMIN FR RAA
 CITRIC-ACID
 COPPER 6 RT BK SMO
 M-CRESOL PL RAA
 O-CRESOL PL RAA
 P-CRESOL PL RAA
 CUDRANIN WD RAA
 CYANIDIN FR CCO
 CYANIDIN-3-GLUCOSIDE FR RAA
 CYCLOMORUSIN RT BK RAA
 CYCLOMULBERRIN RT BK CCO
 CYCLOMULBERROCHROMENE RT
 RAA
 DIHYDROKAEMPFEROL WD HHB
 DIHYDROMORIN WD HHB
 DIHYDROQUERCETIN WD WOI
 5,7-DIHYDROXYCHROMONE PL RAA
 3,4'-DIHYDROXYDIHYDROSTILBENE
 WD RAA
 DIHYDROXYRESVERATROL WD RAA
 ALPHA-BETA-DIMONTANY-GLYCEROL
 PL RAA
 BETA-ECDYSTERONE 1 LF HHB
 ECDYSTERONE LF CCO
 ETHYL-2,4-DIHYDROXYBENZOATE PL
 RAA
 EUGENOL PL RAA
 FAT 68,000-74,000 LF CRC
 FAT 4,000-32,000 FR CRC
 FAT 330,000-380,000 SD HHB
 FIBER 153,000 LF CRC
 FIBER 9,000-60,000 FR CRC
 FOLIC-ACID LF WOI
 FOLINIC-ACID LF WOI
 FRUCTOSE LF CCO
 GABA LF WOI
 GLUCOSE LF CCO
 GLUTAMIC-ACID LF HHB
 GLUTATHIONE LF HHB
 GUAIACOL PL RAA
 HEXALDEHYDE LF WOI
 HEXEN-(2)-AL-(1) LF HHB
 A-BETA-HEXENAL LF WOI

CIS-BETA-GAMMA-HEXANOL PL RAA
 TRANS-BETA-GAMMA-HEXANOL PL RAA
 BETA-GAMMA-HEXENOL LF WOI
 HYDROXYCINNAMIC-ACID LF RAA
 CIS-5-HYDROXY-L-PIPECOLIC-ACID PL JSG
 TRANS-5-HYDROXY-L-PIPECOLIC-ACID PL JSG
 HYDROXYRESVERATROL 20,000 WD HHB
 INOKOSTERONE 10 LF HHB
 IRON-OXIDE(Fe₂O₃) 500-2,600 LF WOI
 IRON 19-247 FR CRC
 IRON 70-290 RT BK CAL SMO
 ISOAMYL-ALCOHOL PL RAA
 ISOBUTYRALDEHYDE LF WOI
 ISOBUTYRIC-ACID LF WOI
 ISOQUERCETIN FR CCO
 ISOQUERCITRIN LF CCO
 KAEMPFEROL WD RAA
 KUWANON-A RT BK CCO
 KUWANON-B RT BK CCO
 KUWANON-C RT BK CCO
 KUWANON-F RT BK CCO
 KUWANON-H RT BK CCO
 KUWANON-G RT BK CCO
 KUWANON-I TI CCO
 KUWANON-J TI CCO
 LEUCINE LF HHB
 LINALOOL PL RAA
 LINOLEIC-ACID SD HHB
 LUPEOL PL RAA
 MACLURIN WD WOI
 MAGNESIUM 2,310-2,450 RT BK CAL SMO
 MAGNESIUM(MGO) 2,500-7,200 LF WOI
 MALIC-ACID LF HHB
 MANGANESE 15-37 RT BK CAL SMO
 METHYL-ETHYL-ACETALDEHYDE LF WOI
 METHYL-ETHYL-KETONE LF WOI
 METHYL-HEXYL-KETONE LF WOI
 METHYL-SALICYLATE PL RAA
 MORACENIN-D RT RAA
 MORACETIN LF RAA
 MORACHALCONE-A TI CCO
 MORIN 3,000-4,400 WD HHB
 MORUSIN RT BK CCO
 MUCILAGE FR CCO
 MULBERRANOL RT BK RAA
 MULBERRIN PL JSG
 MULBERROCHROMENE RT RAA
 MULBERROFURAN-B RT BK CCO
 MULBERROFURAN-M PL JSG
 MULBERROFURAN-N PL JSG
 MYRISTIC-ACID SD HHB
 NIACIN 7-54 FR CRC
 NORARTOCARPANONE WD RAA
 OLEIC-ACID SD HHB
 OXALIC-ACID LF HHB
 OXYDIHYDROMORUSIN RT BK CCO
 OXYRESVERATROL WD RAA
 PALMITOLEIC-ACID SD HHB
 PECTIN LF CCO
 PELARGONIDIN-3-GLUCOSIDE FR RAA
 PETUNIDIN-3-RUTINOSIDE FR RAA
 PHENOL PL RAA
 PHOSPHORUS 320-3,200 FR CRC
 PHOSPHORUS 2,400-4,500 LF CRC
 PHOSPHORUS(P₂O₃) 6,500-14,000 LF WOI
 PHYTATE-PHOSPHORUS 1,183-2,548 LF WOI
 PICEATANNOL WD RAA
 PIPECOLIC-ACID LF WOI
 POTASSIUM 1,520-10,133 FR CRC
 POTASSIUM 4,180-5,270 RT BK CAL SMO
 POTASSIUM(K₂O) 20,000-39,200 LF WOI
 PROLINE LF HHB
 PROPIONIC-ACID LF WOI
 PROTEIN 15,000-120,000 FR CRC
 PROTEIN 140,000-288,000 LF CRC WOI
 PROTEIN 250,000 SD HHB
 QUERCETIN PL JLS58:117
 QUERCETIN-3-GLUCOSIDE LF HHB
 QUERCITRIN LF RAA
 BETA-RESORCYLALDEHYDE WD RAA
 RESORCINOL WD RAA
 RESVERATROL WD RAA
 RIBOFLAVIN 1-14 FR CRC
 RUTIN 20,000-60,000 LF HHB
 RUTIN FR RAA
 SARCOSINE LF WOI
 SCOPOLETIN LF RAA
 SCOPOLIN LF RAA
 SILICA(SiO₂) 18,000-26,000 LF WOI
 BETA-SITOSTEROL 2,000 LF WOI
 SITOSTEROL RT BK CCO
 SITOSTEROL-ALPHA-GLUCOSIDE RT BK CCO
 BETA-SITOSTEROL-BETA-D-GLUCOSIDE PL RAA
 SITOSTERYL-CAPRATE LF CCO
 SITOSTERYL-PALMITATE LF CCO
 SODIUM 370-2,467 FR CRC
 SODIUM 251-520 RT BK CAL SMO

SOLUBLE-SUGARS 122,000-288,000 LF
WOI
STEARIC-ACID SD HHB
STIGMAST-5-EN-3-BETA-OL-7-ONE TI
CCO
SUCCINIC-ACID LF HHB
SULFUR 3,000-5,600 LF WOI
TANNIN ST CCO
TARTARIC-ACID LF WOI
2,4,4',6-
TETRAHYDROXYBENZOPHENONE
WD RAA
TETRAHYDROXYSTILBENE WD WOI
THIAMIN 0-2 FR CRC
TRIGONELLINE LF HHB
3,2',4'-TRIHYDROXYDIHYDROSTILBENE
WD RAA
6,3',5'-TRIHYDROXY-2-
PHENYLBENZOFURAN WD RAA
UMBELLIFERONE RT BK CCO
VALERALDEHYDE LF WOI
VALERIC-ACID PL RAA
WATER 850,000-875,000 FR CRC
XANTHOPHYLL LF WOI
ZINC 9-14 RT BK CAL SMO

MUCUNA PRURIENS (L.) DC.

“COWAGE”

“VELVETBEAN”

ALANINE 5,475-11,600 SD JAD KEAY
ARACHIDIC-ACID 65-1,385 SD CRC
KEAY JAOC61:1207
ARGININE 12,350-26,180 SD JAD KEAY
ASH 30,000-44,000 SD CRC
ASPARTIC-ACID 19,850-42,080 SD JAD
KEAY
BEHENIC-ACID 140-2,265 SD CRC
KEAY JAOC61:1207
BUFOTENINE SD HHB
CALCIUM 1,320-1,600 SD CRC
CARBOHYDRATES 529,000-667,000 SD
CRC
BETA-CARBOLINE SD HHB
CHOLINE SD HHB
CYSTINE 1,400-2,965 SD JAD KEAY
N,N-DIMETHYLTRYPTAMINE SD HHB
N,N-DIMETHYLTRYPTAMINE-N-OXIDE
SD HHB
DOPA 2,400-48,000 SD HHB MPI
ISHS11A:51 JMC14:464
CIS-12,13-EPOXYOCTADEC-TRANS-9-
CIS-ACID
SD MPI

CIS-12,13-EPOXYOCTADEC-TRANS-9-
ENOIC-ACID SD MPI
FAT 7,000-63,000 SD CRC
FIBER 46,000-95,000 SD CRC
GALLIC-ACID SD HHB
GLUTAMIC-ACID 19,075-40,440 SD JAD
KEAY
GLUTATHIONE SD HHB
GLYCINE 7,200-15,265 SD JAD KEAY
HISTIDINE 3,275-6,945 SD JAD KEAY
5-HYDROXYTRYPTAMINE SD MPI
INDOLE-3-ALKYLAMINE SD CRC
IRON 200 SD HHB
ISOLEUCINE 7,500-15,900 SD JAD KEAY
KILOCALORIES 3,440-3,970 SD CRC
LECITHIN 100,000 SD? HHB
LEUCINE 11,875-25,175 SD JAD KEAY
LINOLEIC-ACID 715-30,680 SD CRC
KEAY JAOC61:1207
LINOLENIC-ACID 265-5,800 SD KEAY
JAOC61:1207
LYSINE 9,700-20,564 SD JAD KEAY
METHIONINE 1,875-3,975 SD JAD KEAY
6-METHOXYHARMAN LF MPI
5-METHOXY-N,N-
DIMETHYLTRYPTAMINE-N-OXIDE
SD HHB
1-METHYL-3-CARBOXY-6,7-
DIHYDROXY-1,2,3,4—
TETRAHYDROISOQUINOLONE SD
KEAY
MUCUNADINE SD HHB
MUCUNAIN SD HHB
MUCUNINE SD HHB
MYRISTIC-ACID 15-125 SD
JAOC61:1207
NIACIN 17-34 SD CRC
NICOTINE SD HHB
OLEIC-ACID 735-11,400 SD CRC KEAY
JAOC61:1207
5-OXYINDOLE-3-ALKYLAMINE SD
CRC
PALMITIC-ACID 1,365-33,830 SD CRC
KEAY JAOC61:1207
PALMITOLEIC-ACID 35-630 SD KEAY
JAOC61:1207
PHENYALANINE 7,500-15,900 SD JAD
KEAY
PHOSPHORUS 3,200-4,700 SD CRC jad
PROLINE 9,225-19,555 SD JAD KEAY
PROTEIN 155,000-331,000 SD CRC
PRURIENIDINE SD HHB
PRURIENINE SD MPI
SAPONINS 21,000 SD ABS

RIBOFLAVIN 1.1-2.7 SD CRC
 SERINE 7,650-16,220 SD JAD KEAY
 SEROTONIN SD HHB
 BETA-SITOSTEROL SD HHB
 STEARIC-ACID 390-12,475 SD CRC
 KEAY JAOCS61:1207
 THIAMIN 1.4-5.7 SD CRC
 THREONINE 6,250-13,250 SD JAD KEAY
 TRYPTAMINE SD MPI
 TYROSINE 7,975-16,907 SD JAD KEAY
 VALINE 8,600-18,232 SD JAD KEAY
 VERNOLIC-ACID SD MPI
 WATER 91,000-114,000 CRC

Amino-acids calculated by multiplying by
 protein/6.25 time mg/g N. SEEMS
 PRETTY HIGH

MUSA X PARADISIACA

“BANANA” 1/

ACETIC-ACID FR RAA
 ALANINE 390-1,515 FR USA
 ALUMINUM 1-35 FR AAS
 ANHYDROGALACTURONIC-ACID FR
 RAA
 ARABINOSE FR RAA
 ARGININE 470-1,826 FR USA
 ARSENIC 0.04-0.35 FR AAS
 ASCORBIC-ACID 88-367 FR USA
 ASH 7,100-31,900 FR AAS USA
 ASH 11,710-158,300 SH RAA
 ASPARTIC-ACID 1,130-4,390 FR USA
 BORIC-ACID FR RAA
 BORON 1-17.7 FR AAS BOB JFS51:523
 BROMINE 0.3-27 FR AAS
 BUTYRIC-ACID
 CADMIUM <0.002 FR AAS
 CALCIUM 40-460 FR AAS USA
 JFS51:523
 CAPRIC-ACID 10-39 FR USA
 CAPROLIC-ACID
 CAPRYLIC-ACID
 CARBOHYDRATES 234,300-910,256 FR
 USA
 CARBOHYDRATES 39,000-527,000 SH
 RAA
 BETA-CAROTENE 0.4-2.1 FR USA
 CHOLESTEROL FR RAA
 CHROMIUM 0.02-0.15 FR AAS
 CITRIC-ACID FR RAA
 COBALT <0.005 FR AAS
 COPPER 1-7 FR AAS USA JFS51:523
 CYANIDIN IN RAA

CYCLOARTENOL FR RAA
 CYCLOEUCALENONE FR RAA
 CYCLOLAUDENOL FR RAA
 CYSTINE 170-660 FR USA
 DELPHINIDIN IN RAA
 DOPA FR RAA
 DOPAMINE FR RAA
 ERUCIC-ACID
 FAT 3,450-23,693 FR USA
 FAT 8,480-115,000 SH RAA
 FIBER 5,000-19,425 FR USA
 FIBER 13,210-178,600 SH RAA
 FLUORINE 0.1-0.4 FR AAS
 FOLACIN 0.2-0.9 FR USA
 FORMIC-ACID FR RAA
 6G-BETA-D-
 FRUCTOFURANOSYLSUCROSE FR
 RAA
 FRUCTOSE 35,000 FR RAA
 GADOLEIC-ACID
 GALACTOSE FR RAA
 GLUCOSE 45,000 FR RAA
 GLUTAMIC-ACID 1,110-4,312 FR USA
 GLUTARIC-ACID LF RAA
 GLYCERIC-ACID LF RAA
 GLYCINE 370-1,437 FR USA
 GLYCOLIC-ACID LF RAA
 GLYOXALIC-ACID LF RAA
 HISTIDINE 810-3,147 FR USA
 INDOLE-3-ACETIC-ACID FR RAA
 IRON 3-25 FR AAS USA JFS51:523
 ISOFUCISTEROL FR RAA
 ISOLEUCINE 330-1,282 FR USA
 KAEMPFEROL FR RAA
 ALPHA-KETOGLUTARIC-ACID LF
 RAA
 KILOCALORIES 920-3,574 FR USA
 LAURIC-ACID 20-78 FR USA
 LEAD 0.02-0.2 FR USA
 LEUCINE 710-2,758 FR USA
 LINOLEIC-ACID 560-2,176 FR USA
 ALPHA-LINOLENIC-ACID 330-1,282 FR
 USA
 LYSINE 480-1,865 FR USA
 MAGNESIUM 277-1,465 FR AAS USA
 JFS51:523
 MALIC-ACID 530-3,730 FR RAA
 MALONIC-ACID LF RAA
 MALVIDIN IN RAA
 MANGANESE 1.4-18 FR AAS USA
 JFS51:523
 MERCURY 0.001-0.007 FR AAS
 METHIONINE 110-427 FR USA
 24-METHYLCHOLESTEROL FR RAA

(24S)-24-METHYL-25-
 DEHYDROCHOLESTEROL FR RAA
 24-METHYLENECHOLESTEROL FR
 RAA
 24-METHYLENECYCLOARTENOL FR
 RAA
 24-METHYLENEPOLLINASTANOL FR
 RAA
 24-METHYLENE-31-NOR-5ALPHA-
 CYCLOARTAN-3-ONE FR RAA
 24-METHYLENE-31-NOR-5ALPHA-
 LANOST-9(11)-3BETA-OL FR RAA
 MOLYBDENUM <0.1 FR AAS
 MUFA 410-1,593 FR USA
 MYRISTIC-ACID 30-117 FR USA
 NIACIN 5-23 FR USA
 NICKEL 0.01-0.1 FR AAS
 NITROGEN 1,600-15,000 FR AAS
 31-NORCYCLOLAUDENOL FR RAA
 31-NORCYCLOLAUDENONE FR RAA
 NOREPINEPHRINE FR RAA
 31-NOR-24BETA-METHYL-9,19-
 CYCLOLANOST-25-EN-3ALPHA-OL FL
 RAA
 OBTUSIFOLIOL FR RAA
 OLEIC-ACID 270-1,049 FR USA
 OXALIC-ACID LF RAA
 PALMITIC-ACID 1,250-4,856 FR USA
 PALMITOLEIC-ACID 120-466 FR USA
 PANTOTHENIC-ACID 2.6-10.1 FR USA
 PELARGONIDIN IN RAA
 PEONIDIN IN RAA
 PETUNIDIN IN RAA
 PHENYLALANINE 380-1,476 FR USA
 PHOSPHORIC-ACID FR RAA
 PHOSPHORUS 200-1,190 FR AAS USA
 PHYTOSTEROLS 160-622 FR USA
 POTASSIUM 3,100-16,150 FR AAS USA
 PROLINE 400-1,554 FR USA
 PROTEIN 10,040-41,026 FR USA
 PROTEIN 18,930-255,900 SH RAA
 PUFA 890-3,458 FR USA
 PYRUVIC-ACID LF RAA
 QUERCETIN FR RAA
 RHAMNOSE FR RAA
 RIBOFLAVIN 1.0-3.9 FR USA
 RUBIDIUM 2.5-20 FR AAS
 RUTIN FR RAA
 SELENIUM 0.001-0.04 FR AAS
 SERINE 470-1,826 FR USA
 SEROTONIN FR RAA
 SFA 1,850-7,187 FR USA
 SHIKIMIC-ACID LF RAA
 SILICON 70-350 FR AAS

SITOSATEROL FR RAA
 SODIUM 6-44 FR USA JFS51:523
 STEARIC-ACID 60-233 FR USA
 STIGMASTEROL FR RAA
 SUCCINIC-ACID LF RAA
 SUCROSE 119,000 FR RAA
 SULFUR 78-500 FR AAS
 TARTARIC-ACID FR RAA
 THIAMIN 0.45-1.7 FR USA
 THREONINE 340-1,321 FR USA
 (24R)-4ALPHA,14ALPHA,24-
 TRIMETHYL-5ALPHA-CHOLESTA-
 8,25(27)-3BETA-OL
 TRYPTOPHAN 120-466 FR USA
 TYROSINE 240-932 FR USA
 VALINE 470-1,826 FR USA
 VIT-B6 6-22.5 FR USA
 WATER 738,790-746,410 FR USA
 WATER 926,000 SH RAA
 XYLOSE FR RAA
 ZINC 1.5-10 FR AAS USA

1/ Plantain and banana are treated separately
 to compare USDA and JFS nutritional and
 other data; while they are lumped together
 below for these and other data because the
 "cvs" are often confused. AAS data for
 banana converted to ZMB multiplying APB
 by 3.85 and rounded.

MUSA X PARADISIACA

"PLANTAIN"

ALANINE 510-1,469 FR USA
 ARGININE 1,080-3,111 FR USA
 ASCORBIC-ACID 161-596 FR USA
 ASH 10,090-38,333 FR USA
 ASPARTIC-ACID 1,080-3,110 FR USA
 BORON 2.8-8.5 FR JFS51:523
 BUTYRIC-ACID
 CALCIUM 20-95 FR USA JFS51:523
 CAPRIC-ACID
 CAPROLIC-ACID
 CAPRYLIC-ACID
 CARBOHYDRATES 318,000-918,432 FR
 USA
 BETA-CAROTENE 6-21 FR USA
 COPPER 0.76-6 FR USA JFS51:523
 CYSTINE 200-576 FR USA
 DIMETHYLAMINE FR RAA
 (24S)-14ALPHA,24-DIMETHYL-9BETA,19-
 CYCLO-5ALPHA-CHOLEST-25EN-
 BETA-OL
 DOPAMINE FR RAA

ERUCIC-ACID
 ETHYLAMINE FR RAA
 FAT 2,970-12,758 FR USA
 FIBER 4,250-16,560 FR USA
 FOLACIN 0.2-0.7 FR USA
 GADOLEIC-ACID
 GLUTAMIC-ACID 1,160-3,341 FR USA
 GLYCINE 450-1,296 FR USA
 HISTAMINE FR RAA
 HISTIDINE 640-1,843 FR USA
 5-HYDROXYTRYPTAMINE FR RAA
 IRON 4-17 FR USA JFS51:523
 ISOAMYLAMINE FR RAA
 ISOBUTYLAMINE FR RAA
 ISOLEUCINE 360-1,037 FR USA
 KILOCALORIES 1,220-3,514 FR USA
 LAURIC-ACID
 LEUCINE 590-1,699 FR USA
 LINOLEIC-ACID
 ALPHA-LINOLENIC-ACID
 LYSINE 600-1,728 FR USA
 MAGNESIUM 355-1,118 FR USA
 JFS51:523
 MANGANESE 0.6-1.8 FR JFS51:523
 METHIONINE 170-490 FR USA
 METHYLAMINE FR RAA
 MYRISTIC-ACID
 NIACIN 6.8-20.0 FR USA
 NORADRENALINE FR RAA
 OLEIC-ACID
 OXALIC-ACID 22-5240 FR WBB
 PALMITIC-ACID
 PALMITOLEIC-ACID
 PANTOTHENIC-ACID 2.5-7.7 FR USA
 BETA-PHENYLETHYLAMINE FR
 RAA
 PHENYLALANINE 440-1,267 FR USA
 PHOSPHORUS 290-1,040 FR USA
 JFS51:523
 PHYTOSTEROLS
 POTASSIUM 3,810-15,612 FR USA
 JFS51:523
 PROLINE 50-1,440 FR USA
 PROPANOLAMINE FR RAA
 PROTEIN 11,620-41,414 FR USA
 PUTRESINE FR RAA
 RIBOFLAVIN 0.4-1.9 FR USA
 SERINE 410-1,181 FR USA
 SODIUM 3-192 FR USA JFS51:523
 SPERMIDINE FR RAA
 STEARIC-ACID
 SULFUR 150-450 FR JFS51:523
 THIAMIN 0.48-1.6 FR USA
 THREONINE 340-979 FR USA

(24R)-4,14,24-TRIMETHYL-5ALPHA-
 CHOLESTA-8,25(27)-DIEN-3-BETA-OL
 PL JSG
 TRYPTOPHAN 150-432 FR USA
 TYROSINE 320-922 FR USA
 VALINE 460-1,325 FR USA
 VIT-B6 3-8.7 FR USA
 WATER 642,170-663,430 FR USA
 ZINC 1-7 FR USA JFS51:523

MUSA X PARADISIACA L.

“BANANA/PLANTAIN”

ACETIC-ACID FR WOI
 ALANINE 390-1,515 FR USA
 AMYLASE FR WOI
 AMYLOSE 205,000 FR WOI
 ARGININE 470-3,111 FR USA
 ASCORBIC-ACID 20-749 FR CRC HHB
 PED WOI
 ASCORBIC-ACID 1,380 HU WOI
 ASCORBIC-ACID-OXIDASE FR WOI
 ASH 12,000 FL WOI
 ASH 7,840-38,333 FR CRC PED USA
 ASH 88,000 LF CRC
 ASH 121,000 HU WOI
 ASH 6,000 PI WOI
 ASH 143,000 SP CRC
 ASPARTIC-ACID 1,080-4,390 FR USA
 BIOTIN FR WOI
 BORIC-ACID FR WOI
 BUTYRIC-ACID FR WOI
 CALCIUM 300 FL WOI
 CALCIUM 27-423 FR CRC PED USA
 CALCIUM 7,500 LF CRC
 CALCIUM 100 PI WOI
 CALCIUM 11,600 SP CRC
 CALCIUM-PECTATE 42,000 FR WOI
 CAMPESTEROL FR HHB
 CAPRIC-ACID 10-39 FR USA
 CARBOHYDRATES 50,000 FL WOI
 CARBOHYDRATES 222,000-944,400 FR
 CRC PED
 CARBOHYDRATES 631,000 HU WOI
 CARBOHYDRATES 695,000 LF CRC
 CARBOHYDRATES 97,000 PI WOI
 CARBOHYDRATES 810,000 SP CRC
 ALPHA-CAROTENE 0.12-0.36 FR
 JAF37:657
 BETA-CAROTENE 0.14-22 FR CRC PED
 JAF37:657
 BETA-CAROTENE 0.6-16.6 HU WOI
 CATALASE FR WOI
 CELLULOSE FR WOI

- CHLORINE 1,250 FR WOI
 CHLOROPHYLL 52-103 HU WOI
 CITRIC-ACID FR WOI
 COPPER 1-4 FR USA
 CYCLOARTENOL FR HHB
 CYCLOEUCALENOL FR HHB
 CYSTINE 170-660 FR USA
 DEHYDROASCORBIC-ACID 10-51 FR WOI
 DELPHINIDIN PL PAS
 DOPAMINE 7.9 FR WOI
 DOPAMINE 700 HU WOI
 FAT 2,000 FL WOI
 FAT 1,000-23,893 FR CRC PED USA
 FAT 87,000 HU WOI
 FAT 118,000 LF CRC
 FAT 1,000 PI WOI
 FAT 23,000 SP CRC
 FIBER 19,000 FL WOI
 FIBER 4,250-19,425 (-138,000) FR CRC USA (PED)
 FIBER 100,000 HU WOI
 FIBER 240,000 LF CRC
 FIBER 8,000 PI WOI
 FIBER 205,000 SP CRC
 FOLACIN 0.16-0.85 FR USA
 FRUCTOSE 200-57,000 FR HHB
 GABA FR WOI
 GLUCOSE 200-62,000 FR HHB
 GLUTAMIC-ACID 1,110-4,312 FR USA
 GLYCINE 370-1,437 FR USA
 GAMMA-GUANIDINO-N-BUTYRIC-ACID FR CCO
 HEMICELLULOSE FR WOI
 HISTIDINE 640-3,147 FR USA
 5-HYDROXYTRYPTAMINE PL PAS
 INOSITOL 340 FR HHB
 INVERTASE FR WOI
 IRON 1 FL WOI
 IRON 3-80 FR CRC PED USA
 IRON 11 PI WOI
 ISOLEUCINE 330-1,282 FR USA
 KAEMPFEROL PL PAS
 KILOCALORIES 850-3,900 FR CRC PED
 LATEX 20,000 HU WOI
 LAURIC-ACID 20-78 FR USA
 LEUCINE 590-2,758 FR USA
 LEUCOCYANIDIN FR WOI
 LEUCODELPHINIDIN FR WOI
 LIGNIN FR WOI
 LINOLEIC-ACID 560-2,176 FR USA
 ALPHA-LINOLENIC-ACID 330-1,282 FR USA
 LIPASE FR WOI
 LUTEIN 0.033-0.1 FR JAF37:657
 LYSINE 480-1,865 FR USA
 MALIC-ACID 530-3,730 FR WOI
 MALTOSE FR WOI
 MAGNESIUM 277-1,176 FR USA
 MANGANESE 0.7-8 FR USA WOI
 METHIONINE 110-490 FR USA
 24-METHYLENE-CYCLOARTENOL PL PAS
 24-METHYLENE-CYCLOARTENOL-PALMITATE FR HHB
 MFA 410-1,593 FR USA
 MYRISTIC-ACID 30-117 FR USA
 NEO-BETA-CAROTENE-U 0.1-0.3 HU WOI
 NIACIN 6 FL WOI
 NIACIN 5-29 FR CRC PED
 NIACIN 50 HU WOI
 NIACIN 2 PI WOI
 31-NORCYCLOLAUDENONE FR HHB
 NOREPINEPHRINE 1.9 FR WOI
 NOREPINEPHRINE 122 HU WOI
 OLEIC-ACID 270-1,049 FR USA
 OXALIC-ACID 22-5240 FR WBB
 OXYGENASE FR WOI
 PALMITIC-ACID 1,250-4,856 FR USA
 PALMITOLEIC-ACID 120-466 FR USA
 PANTOTHENIC-ACID 2.5-10.1 FR USA
 PECTIN 7,000-40,000 FR HHB WOI
 PECTIN 3,800-12,800 HU WOI
 PEROXIDASE FR WOI
 PHENYLALANINE 380-1,476 FR USA
 PHOSPHATASE FR WOI
 PHOSPHORUS 500 FL WOI
 PHOSPHORUS 110-1,127 FR CRC PED
 PHOSPHORUS 100 PI WOI
 PHOSPHORUS 2,400 LF CRC
 PIPECOLIC-ACID FR WOI
 POTASSIUM 3,700-15,631 FR CRC PED USA
 PROLINE 400-1,554 FR USA
 PROTEASE FR WOI
 PROTEIN 61,000 FL WOI
 PROTEIN 10,040-65,400 FR CRC PED USA
 PROTEIN 99,000 LF CRC
 PROTEIN 5,000 PI WOI
 PROTEIN 24,000 SP CRC
 QUERCETIN PL PAS
 QUINIC-ACID FR HHB
 RIBOFLAVIN 0.4-6 FR CRC PED USA
 RUTIN FR HHB
 SERINE 410-1,826 FR USA
 SEROTONIN 8-50 FR WOI

SEROTONIN 47-93 HU WOI
 SILICA 238 FR WOI
 SITOINDOSIDE FR RAA
 BETA-SITOSTEROL FR HHB
 SODIUM 8-670 FR CRC PED WOI
 STARCH 7,000-17,500 FR HHB
 STARCH 50,000 ST WOI
 STEARIC-ACID 60-233 FR USA
 STIGMASTEROL FR HHB
 SUCCINIC-ACID FR HHB
 SUCROSE 500-18,400 FR HHB
 SULFUR 100 FR WOI
 THIAMIN 0.3-6.9 FR CRC PED
 THREONINE 340-1,321 FR USA
 TOCOPHEROL 2-11 FR USA
 ALPHA-TOCOPHEROL 30 HU WOI
 TRYPTOPHAN 120-466 FR USA
 TYROSINE 240-932 FR USA
 VALINE 460-1,826 FR USA
 VANILLIC-ACID PL PAS
 VIT-B6 3-22.5 FR USA
 WATER 902,000 FL BU WOI
 WATER 626,000-757,000 FR CRC PED
 WATER 114,600 LX WOI
 WATER 883,000 PI WOI
 XANTHOPHYLLS 1.0-7.3 HU WOI
 ZINC 1-6.5 FR USA

1/PED=Pedersen, M.

MYRICA CERIFERA L.

“BAYBERRY; WAX MYRTLE”

ALUMINUM 151 BK PED 1/
 ASCORBIC-ACID 656 BK PED
 ASH 60,000 BK PED
 ASH 127,000 LF CRC
 CALCIUM 11,200 BK PED
 CARBOHYDRATES 870,000 BK CR PED
 CARBOHYDRATES 743,000 LF CRC
 CARBOHYDRATES 743,000 SD CRC
 BETA-CAROTENE TR BK PED
 CHROMIUM 15 BK PED
 COBALT 35 BK PED
 EO 2,000-4,000 PL PED
 FAT 8,000 BK PED
 FAT 22,000 LF CRC
 FAT 133,000 SD CRC
 FIBER 111,000 BK PED
 FIBER 298,000 LF CRC
 GALLIC-ACID PL PED
 GUM PL PED
 IRON 470 BK PED
 KILOCALORIES 2,290 BK PED

LAURIC-ACID PL PED
 LIMONENE LF CRC
 LINALOOL LF CRC
 MAGNESIUM 490 BK PED
 MANGANESE 64 BK PED
 MIMULINE LF CRC
 MYRCINE LF CRC
 MYRICADIOL BK 411/
 MYRICITRIN PL PED
 MYRISTIC-ACID FR CRC
 NIACIN 28 BK PED
 PALMITIC-ACID FR CRC
 PHENOL BK
 ALPHA-PINENE LF CRC
 PHOSPHORUS TR BK PED
 POTASSIUM 1,960 BK PED
 PROTEIN 62,000 BK PED
 PROTEIN 108,000 LF CRC
 PROTEIN 49,000 SD CRC
 RIBOFLAVIN TR BK PED
 SELENIUM 34 BK PED
 SILICON TR BK PED
 SODIUM 760 BK PED
 STARCH PL PED
 STEARIC-ACID FR CRC
 TANNIC-ACID PL PED
 TANNINS BK
 TARAXEROL PL PED
 TARAXERONE PL PED
 GAMMA-TERPINENE LF CRC
 THIAMIN TR BK PED
 TIN 22 BK PED
 UROCADIOL PL PED
 WATER 782,000 BK PED
 WAX 5,000-10,000 (-320,000) FR CRC
 ZINC TR BK PED

1/PED=Pedersen, M. 1987.

MYRISTICA FRAGRANS HOUTT.

“NUTMEG; MACE”

ACETIC-ACID SD HHB
 2-(4-ALLYL-2,6-DIMETHOXYPHENOXY)-
 1-(4-HYDROXY-3-METHOXYPHENYL)-
 1-PROPANOL
 2-(4-ALLYL-2,6-DIMETHOXYPHENOXY)-
 1-(3,4-METHYLENEDIOXYPHENYL)-1-
 PROPANOL
 2-(4-ALLYL-2,6-DIMETHOXYPHENOXY)-
 1-(3,4,5-TRIMETHOXYPHENYL)-
 PROPANE
 AMYLODEXTRIN 250,000 SD WOI
 ARSENIC 0.01 SD CAL

- D-BORNEOL 4,200-25,600 SD HHB
 BORON 3-13 SD BOB
 BUTYRIC-ACID SD HHB
 CALCIUM 1,110-2,000 SD CAL CRC WOI
 CALCIUM 2,400 AR CRC
 CAMPHENE 80-640 SD AYL BML
 CAPRYLIC-ACID SD HHB
 CARBOHYDRATES 285,000 SD CRC
 CARBOHYDRATES 478,000 AR CRC
 CEROTINIC-ACID SD HHB
 CHROMIUM 13.2 AR ABS 5/
 CHROMIUM 16.4 SD ABS 5/
 1,8-CINEOLE 440-3,520 SD BML
 COBALT 0.4 AR ABS 5/
 COBALT 0.6 SD ABS 5/
 COPAENE SD 411/
 COPPER 6-25 AR ABS 5/ USA
 COPPER 10-21 SD CAL USA ABS 5/
 CYANIDIN PL JLS58:124
 CYMENE SD AYL
 P-CYMENE 120-960 SD BML
 DEHYDROISOEUGENOL
 DIPENTENE 3,200-12,800 SD HHB
 ELEMENE AR 411
 ELEMICIN 20-3,500 SD BML CRC
 EO 4,100-6,200 LF WOI
 EO 1,400 BK WOI
 EO 40,000-150,000 AR HHB
 EO 20,000-160,000 SD AYL
 EUGENOL 40-320 SD AYL CRC
 FAT 250,000-400,000 SD AYL CRC
 FAT 244,000-324,000 AR CRC
 FIBER 40,000-116,000 SD CRC
 FIBER 38,000-48,000 AR CRC
 FORMIC-ACID SD HHB
 FURFURAL 15,000 SD WOI
 FURFUROL 15,000 SD HHB
 GERANIOL SD AYL
 GERANYL-ACETATE 20-160 SD BML
 GUAIAICIN AR
 HEXADECANOIC-ACID (4.8%FAT) SD
 CRC
 IRON 30-45 SD CRC
 IRON 126-140 AR CRC
 ISOEUGENOL 140-320 SD CRC HHB
 KAEMPFEROL PL JLS58:124
 LAURIC-ACID 375-1,600 SD CRC HHB
 LIMONENE 720-5,760 SD BML
 LINALOOL SD AYL
 LINOLEIC-ACID 0-6,000 SD CRC HHB
 MACILENIC-ACID 50,000 AR HHB
 MACILOLIC-ACID 50,000 AR HHB
 MALABARICONE-B 172 SD JNP54:858
 MALABARICONE-C 172 SD JNP54:858
 MAGNESIUM 1,830-2,030 SD CAL CRC
 MAGNESIUM 1,630 AR CRC
 MANGANESE 14 AR USA
 MANGANESE 23-29 SD CAL USA
 CIS-P-MENT-2-EN-1-OL 20-160 SD BML
 5-METHOXYDEHYDRODI-ISOEUGENOL
 AR SD CCO
 6-METHOXYDIHYDROISOEUGENOL
 ANTIBACTERIAL ANTIPLAQUE
 METHOXYEUGENOL 400 SD CRC
 METHYLEUGENOL 20-900 SD BML CRC
 METHYLISOEUGENOL 550 SD CRC
 MYRCENE 740-5,920 SD BML
 MYRISTIC-ACID 60-304,000 SD HHB
 MYRISTICIN 800-12,800 SD AYL CRC
 MYRISTICIN 410-620 LF WOI
 OLEANOLIC-ACID SD CCO
 OLEIC-ACID 13,000-176,000 SD CRC
 HHB
 PALMITIC-ACID 25,000-128,000 SD AYL
 HHB
 PECTIN 5,000-6,000 SD CRC HHB
 PENTOSANS 22,500 SD HHB
 ALPHA-PHELLANDRENE 180-1,440 SD
 BML
 PHOSPHORUS 1,000-1,100 AR CRC
 PHOSPHORUS 2,130-2,400 SD CRC
 PHYTOSTEROLS 620 SD CRC
 PHYTOSTEROLS 730 AR CRC
 PINENE SD AYL
 D-ALPHA-PINENE 5,200-64,000 SD HHB
 D-BETA-PINENE 3,000-64,000 SD HHB
 CIS-PIPERITOL 20-160 SD AYL BML
 POTASSIUM 3,500-5,210 SD CAL CRC
 POTASSIUM 4,630 AR CRC
 1-(5-ACETOXY-3,4-
 DIMETHOXYPHENYL)-2-(4-
 ALLY...PROPYL-ACETATE
 1-(4-HYDROXY-3-METHOXYPHENYL)-2-
 (4-ALLYL-2,6DI...PROPAN-1-OL
 1-(3,4-METHYLENEDIOXYPHENYL)-2-(4-
 ALLYL-2,...PROPYL-ACETATE
 1-(3,4-METHYLENEDIOXYPHENYL)-2-(4-
 ALLYL-2,...PROPYL-BENZOATE
 1-(3,4,5-TRIMETHOXYPHENYL)-2-(4-
 ALLYL-2,6-DIMETHOX...PROPANE
 1-(3,4,5-TRIMETHOXYPHENYL)-2-(4-
 ALLYL-2,6-DIME...PROPAN-1-OL
 PROTEIN 58,000-75,000 SD AYL CRC
 PROTEIN 65,000-67,000 AR CRC
 QUERCETIN PL JLS58:124
 RIBOFLAVIN 4-5 AR CRC
 RIBOFLAVIN 0-1 SD CRC
 SABINENE 5,420-43,360 SD AYL BML

CIS-SABINENE-HYDRATE SD AYL
 TRANS-SABINENE-HYDRATE 60-480 SD
 AYL BML
 SAFROLE 120-2,720 SD CRC HHB
 SCLAREOL SD AYL
 SODIUM 109-160 SD CAL CRC
 SODIUM 800 AR CRC
 STARCH 317,000 AR HHB
 STARCH 300,000 SD AYL
 STEARIC-ACID (1.2% FAT) SD CRC
 ALPHA-TERPINENE 400-3,200 SD BML
 GAMMA-TERPINENE 580-4,640 SD AYL
 BML
 TERPINEN-4-OL 600-4,800 SD BML
 TERPINEN-4-YL-ACETATE 20-160 SD
 BML
 TERPINEOL SD AYL
 ALPHA-TERPINEOL 120-9,600 SD BML
 TERPINOLENE 340-2,720 SD BML
 THIAMIN 3-4 SD CRC
 THIAMIN 3 AR CRC
 ALPHA-THUJENE SD AYL
 WATER 82,000-159,000 AR CRC
 WATER 62,000-143,000 SD CRC
 ZINC 13-20 SD CAL CRC
 ZINC 20 AR CRC

ar=aril or mace as distinct from sd=seed or
 nutmeg 5/ Abs=Pak J.Sci.Ind.Res. 28; 234.
 1985

MYROXYLUM BALSAMUM (L.)

HARMS

"PERU BALSAM"

BENZALDEHYDE CRC
 BENZOIC ACID AYL
 BENZYL-ALCOHOL
 BENZYL-BENZOATE GUM 411/
 BENZYL-CINNAMATE GUM 411/
 ALPHA-BOURBONENE
 BETA-BOURBONENE
 CADALENE CRC
 ALPHA-CADINENE
 DELTA-CADINENE CRC
 ALPHA-CALACORENE CRC
 CALAMENENE CRC
 CARYOPHYLLENE CRC
 CINNAMALDEHYDE CRC
 CINNAMIC-ACID GUM 411/
 CINNAMIC-ALCOHOL CRC
 CINNAMYL-BENZOATE CRC
 CINNAMYL-CINNAMATE GUM 411/
 ALPHA-COPAENE CRC

COUMARIN 4,000 SD
 ALPHA-CURCUMENE CRC
 P-CYMENE CRC
 DIHYDROBENZOIC-ACID
 DIHYDROCINNAMIC-ACID
 DIHYDROMANDELIC-ACID
 1,2-DIAPHENLYETHANE CRC
 BETA-ELEMENE CRC
 EO (50-65%GUM) 411/
 ETHYL-BENZOATE CRC
 EUGENOL
 FARNESOL GUM 411/
 METHYL-CINNAMATE CRC
 ALPHA-MUUROLENE CRC
 GAMMA-MUUROLENE CRC
 NEROLIDOL GUM 411/
 CIS-OCIMENE CRC
 PERURESINOTANNOL
 PERUVIOL
 ALPHA-PINENE CRC
 RESIN (20-28%GUM)
 STYRENE AYL
 TANNIN 4,000
 VANILLIN AYL
 WATER 46,000 SD
 WAX SD

MYROXYLUM BALSAMUM (L.)

HARMS

"TOLU BALSAM"

BENZOIC-ACID (2-8%GUM)
 BENZYL-ALCOHOL
 BENZYL-BENZOATE GUM 411/
 BENZYL-CINNAMATE AYL
 BENZYL-FERULATE
 BENZYL-ISOFERULATE
 D-CADINENE WD
 L-CADINOL WD
 CINNAMEIN (7.5% GUM)
 CINNAMIC-ACID (12-15% GUM)
 CINNAMYL-BENZOATE
 CINNAMYL-CINNAMATE GUM 411/
 DAMMARADIENONE
 20-S-DAMMARENDOL
 1,2-DIPHENYLETHANE
 EO (7-8%GUM)
 EUGENOL
 FARNESOL
 FERULIC-ACID PL 411
 1(5),6-GUAIDIENE ABS
 20-R-HYDROXYDAMMARENONE
 20-S-HYDROXYDAMMARENONE

HYDROXYHOPANONE
 METHYL-CINNAMATE
 NEROLIDOL
 20-R-24-XI-2-OCOTILLONE PL AYL
 OLEANOLIC-ACID AYL
 3-OXO-6-BETA-HYDROXYOLEAN-12-
 EN-28-OIC-ACID HHB
 6-HYDROXY-3-OXYOLEAN-12-EN-28-
 OIC-ACID PL JSG
 RESIN (80%GUM)
 STYRENE
 SUMARESINOLIC-ACID PL 411/
 TOLURESINOTANNOL-CINNAMATE
 URS-12-EN-3-ON-28-AL
 VANILLIN PL 411/

Varieties are confused in the field, test tube and literature. No doubt adulteration has taken place one or more times between the field gatherer and aggregation in the factory. Frankly, I think all values should be merged under *Myroxylum* sp.

MYRTUS COMMUNIS L.

"MYRTLE"

ACETIC-ACID 0-1 PL BML
 ACETONE TR PL BML
 ALCOHOLS 667-1,000 PL GEO
 ALDEHYDES 30-45 PL GEO
 TRANS-ALLOOCIMENE 2-6 PL BML
 BETA-BISABOLENE 0-1 PL BML
 BORNEOL PL GEO
 BORNYL-ACETATE 12-18 PL BML 1/
 2-BUTANOL TR PL BML
 2-BUTANONE TR PL BML
 BUTYL-2-METHYLBUTYRATE 0-1 PL
 BML
 DELTA-CADINENE 8-12 PL BML 1/
 CALACORENE TR PL BML
 CALAMENENE 1-2 PL BML 1/
 CAMPHENE 8-30 PL BML GEO
 CAMPHOR 12-18 PL BML 1/
 DELTA-3-CARENE TR PL BML
 CARVACROL 2-3 PL BML
 CARVONE 8-12 PL BML 1/
 TRANS-CARVYL-ACETATE 0-1 PL
 BML 1/
 CARYOPHYLLENE 3-4
 CARYOPHYLLENE-OXIDE 2-3 PL BML
 1,8-CINEOLE 135-2,065 PL BML GEO
 CITRIC-ACID FR HHB
 COPAENE 2-8 PL BML
 AR-CURCUMENE 4-6 PL BML 1/

P-CYME NE 30-106 PL BML
 3,6-DIGALLOYLGLUCOSE PL HHB
 ALPHA-P-DIMETHYL-STYRENE 0-1 PL
 BML
 DIPENTENE PL GEO
 BETA-ELEMENE 3-4 PL BML 1/
 ELLAGIC-ACID PL HHB
 EO 1,667-5,900 PL GEO HHB
 FURFURAL 0-1 PL BML
 GALLIC-ACID PL HHB
 GERANIOL 1-2 PL GEO
 GERANYL-ACETATE 8-12 PL BML
 GERANYL-2-METHYLBUTYRATE 4-6
 PL BML 1/
 GERANYL-2-METHYLPROPIONATE 4-6
 PL BML 1/
 HEXANAL PL BML
 ALPHA-HUMULENE 3-4 PL BML
 ISOBORNEOL PL GEO
 KAEMPFEROL-GLYCOSIDE PL 411/
 LIMONENE 185-585 PL BML 1/
 D-LIMONENE PL HHB
 LINALOOL 18-505 PL BML HHB
 LINALYL-ACETATE 18-28 PL BML 1/
 LINOLEIC-ACID SD HHB
 MALIC-ACID FR HHB
 2-METHYLBUTANAL 2-6 PL BML
 2-METHYL-BUT-3-EN-2-OL 200-710 PL
 BML 1/
 2-METHYLBUTYL-2-
 METHYLBUTYRATE 2-6 PL BML
 METHYL-CHAVICOL 58-88 PL BML 1/
 METHYL-EUGENOL 8-12 PL BML
 2-METHYLFURAN TR PL BML
 5-METHYL-3-HEXANONE TR PL BML
 2-METHYL-PROPANOL 2-6 PL BML
 2-METHYL-PROPYL-2-METHYL-
 PROPIONATE 2-6 PL BML
 ALPHA-MUUROLENE TRPL BML
 MYRCENE 2-6 PL BML 1/
 MYRICETIN PL HHB
 MYRICITRIN PL HHB
 MYRISTIC-ACID SD HHB
 MYRTENAL 4-6 PL BML 1/
 MYRTENOL 3-4 PL BML
 MYRTENOLS 334-500 PL GEO
 D-MYRTENOL PL GEO
 L-MYRTENOL PL GEO
 CIS-MYRTENYL-ACETATE 8-12 PL
 BML
 MYRTENYL-ACETATE 175-262 PL
 BML 1/
 MYRTENYL-2-METHYL-BUTYRATE 1-2
 PL BML 1/

MYRTENYL-2-METHYL-PROPIONATE
8-12 PL BML 1/
MYRTUCUMMULONE-A PL JSG
NEROL PL GEO
NERYL-ACETATE PL BML
OLEIC-ACID SD HHB
PALMITIC-ACID SD HHB
PENTADECANE 1-2 PL BML 1/
ALPHA-PINENE 242-1,420 PL BML
GEO 1/
BETA-PINENE 2-8 PL BML
QUERCETIN-GLYCOSIDES PL 411/
RESIN PL HHB
ALPHA-SELINENE 0-1 PL BML 1/
BETA-SELINENE 0-1 PL BML 1/
SUGAR PL HHB
TANNIN 140,000 PL HHB
TERPINEN-4-OL 3-4 PL BML
GAMMA-TERPINENE 185-278 PL BML
ALPHA-TERPINEOL 58-88 PL BML 1/
TERPINOLENE 0-1 PL BML 1/
ALPHA-TERPINYL-ACETATE 58-88 PL
BML
TOLUENE 200-710 PL BML 1/
VERBENONE 0-1 PL BML

NARCISSUS TAZETTA L.

"DAFFODIL"

ALKALOIDS 2,300 LF CRC
BENZALDEHYDE FL GEO
BENZOIC-ACID FL GEO
BENZYL-ACETATE 520-1,115 FL CRC
GEO
BENZYL-ALCOHOL 165-360 FL CRC
GEO
CINEOLE 80-175 FL CRC GEO
CINNAMYL-ALCOHOL FL GEO
DEMETHYLHOMOLYCORINE BU CCO
EO 2,100-4,500 FL GEO
EPIGALANTHAMINE PL JSG
EUGENOL FL GEO
FIANCINE PL CRC
GALANTHAMINE PL CRC
GALANTHINE PL CRC
HAEMANTHAMINE PL CRC
HEPTYL-ALCOHOL 5-10 FL CRC GEO
HIPPEASTRINE PL CRC
HOMOLYCORINE PL CRC
6ALPHA-HYDROXY-3-O-METHYL-
EPIMARITIDINE PL JSG
6BETA-HYDROXY-3-O-METHYL-
EPIMARITIDINE PL JSG
INDOL 30-65 FL CRC GEO

ISORHAMNETIN FL CRC
LINALOOL 525-1,125 FL CRC GEO
LYCORAMINE BU CCO
LYCORANOLIDINE BU CCO
LYCORANOLINE BU CCO
LYCORENINE BU CCO
LYCORINE ST CRC CCO
MARITIDINE PL JSG
MARITIDINE-O-LYCORAMINE PL JSG
O-METHYLMARITIDINE PL JSG
3-O-MARITIDINE PL JSG
NARCICLASINE 66 BU CRC
NARCISSIDINE PL CRC
NARCISSIN FL CRC
NARCITINE PL CRC
NARTAZINE PL CRC
NARZETTINE PL CRC
NONANAL 1 FL CRC GEO
PANCRACTINE PL JSG
PHENYLETHYL-ACETATE 10-20 FL
CRC GEO
PHENYLETHYL-ALCOHOL 2-5 FL CRC
GEO
ALPHA-PHENYLPROPYL-ACETATE
35-75 FL CRC GEO
ALPHA-PHENYLPROPYL-ALCOHOL
70-150 FL CRC GEO
PLUVIINE BU CCO
PRETAZETTINE ST CCO
PSEUDOLYCORINE ST CCO
SUISEMINE PL CRC
TAZETTINE PL CRC
ALPHA-TERPINEOL 90-190 FL CRC GEO
UNDECALACTONE PL CRC

NARDOSTACHYS CHINENSIS
BATALIN

"CHINESE SPIKENARD"

ARACHIDIC-ACID RT HHB
ARISTOLA-1,9-DIENE PL JSG
ARISTOLA-1(10),8-DIEN-2-ONE PL JSG
1(10)-ARISTOLENE RT HHB
9-ARISTOLENE RT HHB
ARISTOL-9-EN-1-OL PL JSG
DELTA-1(10)-ARISTOLENON-(2) RT
HHB
ARSENIC 2.11 RH CAL
BEHENIC-ACID RT HHB
CALCIUM 11,600 RH CAL
COPPER 10 RH CAL
EO 10,000-32,000 RH CCO HHB
HENEICOSANIC-ACID RT HHB

BETA-IONONE RT HHB
 IRON 1,210 RH CAL
 ISONARDOSINONE RT HHB
 JATAMANSIC-ACID PL JSG
 JATAMANSIN RH CCO
 JATAMANSONE 2,500 RT HHB
 MAGNESIUM 2,590 RH CAL
 BETA-MAALIENE RH CCO
 MAALIOL RH CCO
 MANGANESE 141 RH CAL
 MARGARINIC-ACID RT HHB
 MERCURY 0.13 RH CAL
 MYRISTIC-ACID RT HHB
 NARCHINOL-A RT HHB
 NARDOL PL JSG
 NARDOSINONE 5,000 RT HHB
 D-NARDOSTACHONE RH CCO
 OROSELOL RH CCO
 PALMITIC-ACID RT HHB
 PATCHOULI-ALCOHOL RT CCO
 POTASSIUM 10,800 RH CAL
 SODIUM 596 RH CAL
 STEARIC-ACID RT HHB
 VALERANAL RT HHB
 VALERANONE RH CCO
 ZINC 22 RH CAL

JATAMANSIN RT MPI
 JATAMANSINOL RT MPI
 JATAMANSONE RT WOI
 LOMATIN PL JSG
 MAALIOL PL JSG
 MARGARINIC-ACID PL HHB
 MYRISTIC-ACID PL HHB
 NARDOL RT MPI
 NARDOSIACIONE PL JSG
 NARDOSTECHONE RT MPI
 NORSEYCHELANONE RT MPI
 OROSELOL RT MPI
 ALPHA-PATCHOULENE RT MPI
 BETA-PATCHOULENE RT MPI
 PATCHOULI-ALCOHOL RT MPI
 ALPHA-PINENE PL HHB
 BETA-PINENE PL HHB
 SELINIDIN RT MPI
 SEYCHELANE RT MPI
 SEYCHELLENE RT MPI
 BETA-SITOSTEROL RT MPI
 1,8,9,10-TETRAHYDROARISTOLANE-2-ONE RT MPI
 VALERANAL RT MPI
 VALERANONE RT MPI

NARDOSTACHYS JATAMANSI DC.

“INDIAN NARD”
 “SPIKENARD”

ANGELICIN RT MPI
 1(10)-ARISTOLEN-2-ONE 18-120 RT HHB
 MPI
 BEHENIC-ACID PL HHB
 CALARENE RT MPI
 CALARENOL RT MPI
 DELTA-3-CARENE PL HHB
 18,9,10- DEHYDROARISTOLANONE-(2)
 6-40 RT HHB MPI
 DIHYDROSEYCHELLENE RT MPI
 ELEMOL RT MPI
 EO 19,000-20,000 RT MPI WOI
 BETA-EUDESOL RT MPI
 N-HEXACOSANE RT MPI
 N-HEXACOSANOL RT MPI
 N-HEXACOSANYL-ARACHIDATE RT
 MPI
 N-HEXACOSANYL-ISOVALERATE RT
 MPI
 BETA-IONONE 25-180 RT MPI HHB
 ISOVALERIC-ACID RT HHBV
 JATAMANSIC-ACID RT WOI

NASTURTIUM OFFICINALE R.
 BR.

“WATERCRESS”
 “BERRO”

ALANINE 1,370-27,400 HE USA
 ARGININE 1,500-30,000 HE USA
 ASCORBIC-ACID 430-13,690 HE JAD
 USA
 ASH 13,000-179,000 HE CRC PAN
 ASPARTIC-ACID 1,870-37,400 HE USA
 BIOTIN
 CALCIUM 1,200-24,000 HE JAD USA
 CARBOHYDRATES 12,900-25,800 HE
 JAD USA
 BETA-CAROTENE 28-560 HE JAD USA
 COPPER
 CYSTINE 70-1,400 HE USA
 DIASTASE PL HHB
 EO 600-660 PL HHB WOI
 FAT 1,000-20,000 HE JAD USA
 FIBER 700-77,670 HE JAD PAN USA
 FOLACIN
 GLUCONASTURTIN PL HHB
 GLUTAMIC-ACID 1,900-38,000 HE USA
 GLYCINE 1,120-22,400 HE USA
 HISTIDINE 400-8,000 HE USA

IRON 2-262 HE JAD PAN USA
 Isoleucine 530-10,600 HE USA
 KILOCALORIES 300-2,915 HE PAN
 LEUCINE 1,660-33,200 HE USA
 LYSINE 1,340-26,800 HE USA
 MAGNESIUM 210-4,200 HE USA
 MANGANESE
 METHIONINE 200-4,000 HE USA
 NIACIN 2-113 HE JAD PAN USA
 PANTOTHENIC-ACID 3-62
 PHENYLALANINE 1,140-22,800 HE USA
 PHENYLETHYL-ISOTHIOCYANATE
 PHOSPHORUS 600-12,000 HE JAD USA
 POTASSIUM 3,300-66,000 HE JAD USA
 PROLINE 960-19,200 HE USA
 PROTEIN 23,000-460,000 HE JAD USA
 RIBOFLAVIN 1-25 HE JAD PAN USA
 SERINE 600-12,000 HE JAD USA
 SODIUM 410-8,200 HE JAD USA
 THIAMIN 1-18 HE JAD USA
 THREONINE 1,330-26,600 HE USA
 TRYPTOPHAN 300-6,000 HE USA
 TYROSINE 630-12,600 HE USA
 VALINE 1,370-27,400 HE USA
 VIT-B6 1-26 HE USA
 WATER 897,000-951,000 HE JAD PAN
 USA
 ZINC

NELUMBO NUCIFERA L.

“WATER LOTUS”

ALANINE 540-2,585 RH USA
 ALANINE 2,390-7,242 SD USA
 ANONAIN LF CCO
 DL-ARMEPAVINE LF CCO
 ARSENIC 0.11 SD CAL
 ARGININE 880-4,210 RH USA
 ARGININE 3,380-10,242 SD USA
 ASCORBIC-ACID 15 RH WOI
 ASCORBIC-ACID 0 SD USA
 ASH 9,700-68,000 RH USA WOI
 ASH 9,000-52,000 SD CRC
 ASPARAGINE 20,000 RH CCO WOI
 ASPARTIC-ACID 3,690-17,655 RH USA
 ASPARTIC-ACID 5,050-15,303 SD USA
 CALCIUM 1,360-1,511 FR WOI
 CALCIUM 450-3,704 RH USA WOI
 CALCIUM 590-13,333 SD CAL CRC
 USA
 CARBOHYDRATES 666,000-740,000 FR
 WOI
 CARBOHYDRATES 120,000-824,880 RH
 CRC USA

CARBOHYDRATES 139,000-762,000 SD
 CRC
 BETA-CAROTENE 0 RH USA
 BETA-CAROTENE 0.06-0.18 SD USA
 D-CATECHIN RT HHB
 CERYL-ALCOHOL LF HHB
 CETYL-ALCOHOL LF HHB
 COPPER 17 SD CAL
 CYSTINE 220-1,055 RH USA
 CYSTINE 540-1,636 SD USA
 DEHYDROANONAIN LF HHB
 DEHYDRONUCIFERINE LF HHB
 DEHYDROROEMERINE LF HHB
 DEMETHYLCOCLAURINE SD CCO
 ERUCIC-ACID 310-939 SD USA
 FAT 24,000-26,667 FR WOI
 FAT 1,000-6,790 RH WOI USA
 FAT 2,000-27,000 SD CCO CRC
 FIBER 26,000-28,889 FR WOI
 FIBER 8,000-49,383 RH WOI
 FIBER 10,700-131,000 SD CRC USA
 GADOLEIC-ACID 20-95 RH USA
 GADOLEIC-ACID 120-364 SD USA
 D-GALLOCATECHIN RT HHB
 GLUCOLUTEOLIN LF HHB
 GLUTAMIC-ACID 1,390-6,650 RH USA
 GLUTAMIC-ACID 9,570-29,000 SD USA
 GLUTATHIONE SD HHB
 GLYCINE 1,560-7,464 RH USA
 GLYCINE 2,210-6,697 SD USA
 HIGENAMINE PL CCO
 HISTIDINE 380-1,820 RH USA
 HISTIDINE 1,150-3,485 SD USA
 1-(P-HYDROXYBENZYL)-6,7-
 DIHYDROXY-1,2,3,4-
 TETRAHYDROISOQU...
 2-HYDROXY-1-METHOXYAPORPHINE
 PL JSG
 HYPEROSIDE FL HHB
 IRON 7-70 RH USA WOI
 IRON 9.5-71 SD CAL CRC USA
 Isoleucine 540-2,585 RH USA
 Isoleucine 2,050-6,212 SD USA
 ISOLIENSINE PL JSG
 ISOLIENSININE SD CCO
 ISOQUERCETIN FL CCO
 KAEMPFEROL PL HHB
 KAEMPFEROL-3-GLUCURONIDE FL
 HHB
 KILOCALORIES 560-2,680 RH USA
 KILOCALORIES 630-3,900 SD CRC
 LEUCINE 690-3,300 RH USA
 LEUCINE 3,260-9,879 SD USA
 LEUCOCYANIDIN LF HHB

LEUCODELPHINIDIN LF HHB
 LIENSININE EM SD CCO
 LINOLEIC-ACID 140-670 RH USA
 LINOLEIC-ACID 2,850-8,636 SD USA
 LINOLENIC-ACID 60-285 RH USA
 LINOLENIC-ACID 270-818 SD USA
 LIRIODENINE LF ST CCO
 LOTUSINE SD CCO
 LOTUSINE-CHLORIDE EM CCO
 LUTEOLIN FL CCO
 LUTEOLIN-7-GLUCOSIDE EM HHB
 LYSINE 940-4,500 RH USA
 LYSINE 2,640-8,000 SD USA
 MAGNESIUM 200-1,215 RH USA
 MAGNESIUM 560-2,650 SD CAL USA
 MANGANESE 125 SD CAL
 MERATINE FL HHB
 METHIONINE 220-1,050 RH USA
 METHIONINE 720-2,182 SD USA
 N-METHYLCOCLAURINE LF CCO
 4'-METHYL-N-METHYLCOCLAURINE
 LF CCO
 O-METHYLCORYPALLINE SD CCO
 N-METHYLISOCOCLAURINE LF HHB
 MUFA 200-955 RH USA
 MUFA 1,040-3,152 SD USA
 MYRISTIC-ACID 0 RH USA
 MYRISTIC-ACID 10-30 SD USA
 NEFERIN SD CCO
 NELUMBINE LF CCO
 NELUMBOSIDE LF CCO
 NEOCHLOROGENIC-ACID RT HHB
 NIACIN 21-130 RH CCO CRC
 NIACIN 4-78 SD CRC USA
 DL-N-NORARMEPAVINE ST CCO
 N-NOR-ARMEPAVINE SD CCO
 NORNUCIFERINE LF CCO
 N-NORNUCIFERINE SD CCO
 NUCIFERINE LF SD CCO
 OLEIC-ACID 140-670 RH USA
 OLEIC-ACID 620-1,879 SD USA
 OXOUSHINSUNINE SD CCO
 PALMITIC-ACID 280-1,340 RH USA
 PALMITIC-ACID 770-2,333 SD USA
 PALMITOLEIC-ACID 20-95 RH USA
 PHENYLALANINE 470-2,250 RH USA
 PHENYLALANINE 2,060-6,242 SD USA
 PHOSPHORUS 2,940-3,267 FR WOI
 PHOSPHORUS 1,000-4,785 RH USA
 PHOSPHORUS 590-7,130 SD CRC
 POTASSIUM 3,820-34,925 RH USA
 POTASSIUM 3,670-16,652 SD CAL CRC
 USA
 PROLINE 1,360-6,500 RH USA

PROLINE 3,440-10,424 SD USA
 PRONUCIFERINE SD CCO
 D-PRONUCIFERINE LF CCO
 PROTEIN 172,000-191,111 FR WOI
 PROTEIN 26,000-167,000 RH CCO USA
 PROTEIN 41,300-242,000 SD CCO CRC
 USA
 PUFA 200-955 RH USA
 PUFA 3,120-9,454 SD USA
 QUERCETIN FL CCO
 QUERCETIN-3-GLUCURONIDE FL HHB
 RAFFINOSE RH HHB
 REDUCING-SUGARS 24,000-26,667 FR
 WOI
 REDUCING-SUGARS 15,600-96,296 RH
 WOI
 RIBOFLAVIN 0.6-3.7 RH WOI
 RIBOFLAVIN 0.4-2.6 SD CRC USA
 ROBININ PL HHB
 ROEMERINE LF CCO
 RUTIN EM HHB
 SERINE 600-2,870 RH USA
 SERINE 2,520-7,636 SD USA
 SFA 880-2,667 SD USA
 SODIUM 395-1,935 RH USA
 SODIUM 10-490 SD CAL CRC USA
 STACHYOSE RH CCO
 STARCH 92,500-570,988 RH WOI
 STEARIC-ACID 10-50 RH USA
 SUCROSE 41,000-45,556 FR WOI
 SUCROSE 4,100-25,309 RH WOI
 TANNIC-ACID RH CCO
 THIAMIN 2.2-14 RH CRC WOI
 THIAMIN 1.5-7.5 SD CRC
 THREONINE 510-2,440 RH USA
 THREONINE 2,000-6,060 SD USA
 TRIGONELLINE RH CCO
 TRYPTOPHAN 200-955 RH USA
 TRYPTOPHAN 590-1,788 SD USA
 TYROSINE 2901,390 RH USA
 TYROSINE 1,000-3,030 SD USA
 VALINE 550-2,630 RH USA
 VALINE 2,660-8,061 SD USA
 WATER 750,000-838,000 RH USA WOI
 WATER 143,000-802,00 SD CRC
 ZINC 28 SD CAL

NEPETA CATARIA L.

“CATNIP”

ALUMINUM 250 PL PED
 CALCIUM 6,160 PL PED
 CAMPHOR 16-80 PL HHB
 CARVACROL PL 411/

CARYOPHYLLENE 40-350 PL HHB
 CHROMIUM 27 PL PED
 CITRAL
 CITRONELLAL PL 411/
 COBALT 118 PL PED
 5,9-DEHYDRONEPETALACTONE PL
 411/
 (1R,5R,8S,9S)-DEOXYLOGANIC-ACID
 7-DEOXYLOGANIC-ACID PL 411/
 DIHYDRONEPETALACTONE 6-30 PL
 HHB
 EO 2,000-10,000
 5-EPIDEOXYLOGANIC-ACID PL 411/
 EPINEPETALACTONE 10-4,000
 FAT 212,000 SD
 GERANIOL PL 411/
 ALPHA-HUMULENE
 IRON 1,380 PL PED
 ISODIHYDRONEPETALACTONE PL
 HHB
 LINOLEIC-ACID (18% SD OIL)
 LINOLENIC-ACID (57% SD OIL)
 MAGNESIUM 2,070 PL PED
 MANGANESE 374 PL PED
 METHYL-NEPETALACTONE PL HHB
 MYRCENE 8-40
 NEPETALACTONE 1,200-9,900 PL HHB
 NEPETALIC-ACID PL 411/
 NEPETALIC-ANHYDRIDE
 NEPETARIASIDE
 NEPETOGLUCOSYLESTER
 NEPETOL
 TRANS-CIS-NEPETONIC-ACID-METHYL-
 ESTER
 TRANS-TRANS-NEPETONIC-ACID-
 METHYL-ESTER
 NEROL PL 411/
 CIS-OCIMENE 10-50
 TRANS-OCIMENE 4-20
 OLEIC-ACID (12% SD OIL)
 PHOSPHORUS 2,410 PL PED
 POTASSIUM 23,500 PL PED
 PROTEIN 98,000 PL PED
 PROTEIN 184,000 SD
 PULEGONE PL 411/
 ROSMARINIC-ACID 2,000 PL FT62:166
 SELENIUM 123 PL PED 1/
 SILICON TR PL PED
 SODIUM TR PL PED
 THYMOL PL 411/
 TIN 11 PL PED
 ZINC TR PL PED

1/PED=Pedersen's Nutritional Herbology.

NERIUM OLEANDER L.

"OLEANDER"

ADIGOSIDE PL JSG
 ADYNERIN LF RAA
 ALKALOIDS 10 FL RAA
 ALKALOIDS 50 LF RAA
 ALKALOIDS 20 ST RAA
 ALPHA-AMYRIN PL RAA
 16-ANHYDRO-DEACETYL-NERIGOSIDE
 SD WOI
 CAMPESTEROL PL RAA
 CAOUTCHOUC 490 PL WOI
 CAPRIC-ACID SD RAA
 CAPROIC-ACID SD RAA
 CAPRYLIC-ACID SD RAA
 CHOLINE PL RAA
 CORNERIN LF RAA
 CORTENERIN LF RAA
 DEACETYLOLEANDRIN LF RAA
 DIACETYL-NERIGOSIDE SD WOI
 EO 300 FL RAA
 FAT 170,000-294,000 SD CRC WOI
 FOLIANDRIN LF RAA
 FOLINERIN LF RAA
 GENTIOBIOSYLOLEANDRIN LF CRC
 GITOXIGENIN FL RAA
 GLYCOSIDES 9,600 ST BK RAA
 GLYCOSIDES 5,500 FL RAA
 GLYCOSIDES 6,300 LF RAA
 GLYCOSIDES 5,000 ST RAA
 HCN PL CRC
 9-D-HYDROXY-CIS-12-OCTADECANOIC-
 ACID SD RAA
 ISOQUERCITRIN LF RAA
 KAEMPFEROL-3-RHAMNOGLUCOSIDE
 LF RAA
 LAURIC-ACID SD RAA
 LINOLEIC-ACID FL RAA
 LINOLENIC-ACID FL RAA
 NERIANTHIN LF RAA
 NERIGOSIDE SD WOI
 NERIIN LF RAA
 NERITALOSIDE LF RAA
 ODOROBOSIDE PL WOI
 ODOROSIDE-A LF RAA
 ODOROSIDE-H LF RAA
 ODOROTRIOSIDE PL WOI
 OLEAGENIN LF RAA
 OLEANDOMYCIN PL RAA
 OLEANDRIN LF RAA
 OLEANOLIC-ACID PL RAA
 OLEASIDES LF RAA

OLEIC-ACID SD RAA
 PALMITIC-ACID SD RAA
 PHYTOSTEROLS 140 SD CRC
 PROTEIN 300,000 SD CRC
 PSEUDOCURAMINE PL CRC
 QUERCETIN LF RAA
 QUERCITRIN LF RAA
 QUERCETRIN-3-RHAMNOGLUCOSIDE
 LF CRC
 ROSAGININ BK WOI
 RUTIN LF RAA
 BETA-SITOSTEROL PL RAA
 STEARIC-ACID FL RAA
 STIGMASTEROL PL RAA
 STROSPESIDE LF RAA
 UREHITOXIN LF RAA
 URSOLIC-ACID 43,000 PL CRC
 UZARIGENIN FL RAA

NEUROLAENA LOBATA L.

“CONTRAGAVILANA”
 “BITTER WOOD”

ACETIC-ACID PL ABS
 FAT 348,000 SD CRC
 LOBATIN-A PL JSG
 LOBATIN-B PL JSG
 NEUROLLENIN-A PL JSG
 NEUROLLENIN-B PL JSG
 PROTEIN 219,000 SD CRC

NICOTIANA GLAUCA R. GRAH.

“TREE TOBACCO”

ALKALOIDS 12,000 FR CRC
 ALKALOIDS 11,000 LF CRC
 ANABASINE LF ALK
 NICOTINE LF ALK
 NORNICOTINE LF ALK
 RUTIN 12,000-21,000 LF CRC

NICOTIANA RUSTICA L.

“AZTEC TOBACCO”

ANABASINE LF CRC
 NICOTINE LF CRC
 NORNICOTINE LF CRC

NICOTIANA TABACUM L.

“TOBACCO”

ACETALDEHYDE LF HHB
 ACETIC-ACID LF WOI

ACETOPHENONE LF HHB
 (13E)-ACETOXY-13-LABDEN-8-OL PL
 JSG
 4-ACETYL-5-METHYLFURAN LF HHB
 AESCULETIN LF WOI
 ALKALOIDS 40,000-60,000 LF WOI
 P-ALLYL-CATECHOL LF WOI
 AMMONIA LF WOI
 N-AMYLAMINE LF HHB
 AMYLASE LF WOI
 ANABASINE LF WOI
 L-ANATABINE LF WOI
 ANATALLINE RT HHB
 ANILINE LF HHB
 M-ANISIDINE LF HHB
 ARABINOSE LF WOI
 ASH 120,000-250,000 LF WOI
 ASPARAGINE LF WOI
 ASTRAGALIN LF HHB
 BENZOIC-ACID LF WOI
 BETAINE LF HHB
 N-BUTYLAMINE LF HHB
 T-BUTYLAMINE LF HHB
 BUTYRIC-ACID LF HHB
 CAFFEIC-ACID LF WOI
 CAFFEYOYLPUTRESCINE FL HHB
 CAFFEYOYLSPERMIDINE PL JSG
 CAPRYLIC-ACID FL HHB
 CARBOHYDRATES 250,000-500,000 LF
 WOI
 BETA-CAROTENE LF WOI
 (-)-BETA-CARYOPHYLLENE-EPOXIDE
 LF HHB
 CATALASE LF WOI
 CATECHOL LF HHB
 CELLULOSE LF WOI
 CETYL-ALCOHOL FL HHB
 CHLOROGENIC-ACID LF WOI
 CICHORIIN LF WOI
 1,8-CINEOLE LF HHB
 CITRIC-ACID LF WOI
 P-COUMARIC-ACID FL HHB
 M-CRESOL LF WOI
 TRANS-CROTONIC-ACID LF WOI
 CYANIDIN-3-RHAMNOGLUCOSIDE FL
 HHB
 CYCLOARTENOL LF HHB
 2-DECANONE LF HHB
 DEXTRIN LF WOI
 DI-N-BUTYLAMINE LF HHB
 DICAFFEYOYLSPERMIDINE PL JSG
 DIETHYLAMINE LF HHB
 DIMETHOXYPHENOL LF HHB
 2,3-DIMETHOXYPHENOL LF HHB

- 3,5-DIMETHOXYPHENOL LF HHB
 DIMETHYLAMINE LF HHB
 2,3-DIMETHYLANILINE LF HHB
 2,5-DIMETHYLANILINE LF HHB
 2,6-DIMETHYLANILINE LF HHB
 3,4-DIMETHYLANILINE LF HHB
 DI-N-PROPYLAMINE LF HHB
 2,3-DIPYRIDYL LF WOI
 DRIMAN-8,11-DIOL LF HHB
 DRIMAN-8-OL LF HHB
 EMULSIN LF WOI
 END0-2-(1-METHYL-4-ISOPROPYL-7,8-DIOXABICYCLO-[3,2,1]-OCT-6-YL)-PROPEN-2-OL
 ERGOSTEROL LF WOI
 ETHANOL LF HHB
 ETHYLAMINE LF HHB
 0-ETHYLANILINE LF HHB
 4-ETHYL-2,3-DIMETHOXYPHENOL LF HHB
 ETHYL-PHENOL LF HHB
 EUGENOL LF WOI
 EXO-1-(1-METHYL-4-ISOPROPYL-7,8-DIOXABICYCLO-[3,2,1]-OCT-6-YL)-ETHANOL PL JSG
 EXO-1-(1-METHYL-4-ISOPROPYL-7,8-DIOXABICYCLO-[3,2,1]-OCY-6-YL)-METHYLKETONE
 FAT 250,000-350,000 SD HHB
 FERULIC-ACID FL HHB
 FLAVOXANTHIN LF WOI
 FORMIC-ACID LF WOI
 FRUCTOSE RT WOI
 FUMARIC-ACID LF WOI
 FURAN-BETA-CARBONIC-ACID LF HHB
 FURFUROL LF HHB
 2-FUROIC-ACID? LF WOI
 GALACTOSE LF WOI
 GABA LF WOI
 GALACTURONIC-ACID LF WOI
 GIBBERELLINS LF HHB
 GLUTINOSONE PL JSG
 D-GLYCERIC-ACID 5,000-15,000 LF WOI
 GLYCOLASE LF WOI
 GLYXOYLIC-ACID LF WOI
 GUAIACOL LF WOI
 HENTRIACONTANE LF WOI
 HEPTACOSANE LF WOI
 N-HEPTYLAMINE LF HHB
 N-HEXYLAMINE LF HHB
 M-HYDROXYACETOPHENONE LF WOI
 4-HYDROXYCOUMARIC-ACID LF WOI
 12-HYDROXY-13-EPIMANOYLOSIDE LF HHB
 BETA-INDOLEACETICACID LF HHB
 INOSITOL LF WOI
 INVERTASE LF WOI
 ISOAMYLAMINE LF WOI
 ISOBUTYLAMINE LF HHB
 ISOBUTYRALDEHYDE LF HHB
 ISOBUTYRIC-ACID? LF WOI
 ISOEUGENOL LF WOI
 ISONICOTEINE LF HHB
 ISONORDRIMENONE LF HHB
 ISOPROPIONIC-ACID LF HHB
 3-ISOPROPENYL-5-METHYL-1,2-DIHYDRONAPHTHALENE PL JSG
 CIS-2-ISOPROPENYL-8-METHYL-1,2,3,4-TETRAHYDRO-1-NAPHTHALENOL PL JSG
 (E)-5-ISOPROPYL-6,7-EPOXY-8-HYDROXY-8-METHYLNONAN-2-ONE PL JSG
 5-ISOPROPYL-3-HEPTEN-2-ONE LF HHB
 (E)-5-ISOPROPYL-8-HYDROXY-8-METHYLNON-6-EN-2-ONE PL JSG
 5-ISOPROPYL-8-HYDROXYNONAN-2-ONE PL JSG
 (E)-5-ISOPROPYL-8-HYDROXYNON-6-EN-2-ONE PL JSG
 (E)-3-ISOPROPYL-8-METHYLHEPTA-4,6-DIEN-1-OL PL JSG
 5-ISOPROPYLNONANE-2,8-DIOL PL JSG
 (E)-5-ISOPROPYLNON-3-ENE-2,8-DIOL PL JSG
 ISOQUERCITRIN 25 LF WOI
 ISOVALERIANIC-ACID FL HHB
 KAEMPFEROL LF WOI
 KAEMPFEROLGLUCOSIDE LF HHB
 ALPHA-KETO-GLUTARIC-ACID LF WOI
 KETONE-ALDEHYDE-MUTASE LF WOI
 (11E,13R)-LABDA-11,14-DIENE-8,13-DIOL PL JSG
 (11E,13S)-LABDA-11,14-DIENE-8,13-DIOL PL JSG
 LACTIC-ACID LF WOI
 LATHREINE PL JSG
 LEVANTANOLIDES LF HHB
 LEVANTENOLIDES LF HHB
 LIGNIN LF WOI
 LINOLEIC-ACID 50,000-70,000 SD HHB
 LIPASE LF WOI
 LUTEIN LF WOI
 MALEIC-ACID LF WOI
 MALIC-ACID LF WOI
 MALONIC-ACID LF WOI

- MALTOSE LF WOI
 MANNOSE RT WOI
 MEGASTIGMA-5(13),7-DIENE-6,9-DIOL
 PL JSG
 MEGASTIGMA-5.8-DIENE-4-ONE PL JSG
 (3S,6R,73,9R)-MEGASTIGMADIENE-3,9-
 DIOL PL JSG
 (3S,6R,73,9S)-MEGASTIGMADIENE-3,9-
 DIOL PL JSG
 MEGASTIGMA-4,6,8-TRIENE-3-ONE PL
 JSG
 6-MEGASTIGMA-4,7,9-TRIENE-3-ONE
 PL JSG
 MELILOTIC-ACID LF WOI
 2-METHOXYCATACHOL LF HHB
 METHOXYPHENOL LF HHB
 METHYLAMINE LF WOI
 N-METHYL-L-ANABASINE LF WOI
 N-METHYL-L-ANATABINE LF WOI
 5-METHYL-2,3'-BIPYRIDINE PL JSG
 N-METHYL-N-BUTYLAMINE LF WOI
 4-METHYL-CATECHOL LF HHB
 4-METHYL-2,6-DIMETHOXYPHENOL LF
 HHB
 METHYLETHYLACETIC-ACID LF WOI
 N-METHYLETHYLAMINE LF WOI
 5-METHYL-FURFUROL LF HHB
 METHYLGUAIACOL LF WOI
 5-METHYL-3-HEXEN-2-ONE LF HHB
 N-METHYLISOAMYLAMINE LF WOI
 N-METHYLISOBUTYLAMINE LF WOI
 N-METHYLISOPROPYLAMINE LF WOI
 18-METHYL-3-
 ISOPROPYLCYCLOPENTANE-1,2-
 DICARBOXYLIC-ACID PL JSG
 2-METHYL-5-ISOPROPYL-1-
 CYCLOPENTENE-1-CARBOXYLIC-
 ACID PL JSG
 4-METHYL-PENTAN-2-ONE LF HHB
 METHYLPHENYLACETATE LF HHB
 N-METHYLPYRROLINE LF WOI
 BETA-METHYL-VALERIC-ACID LF WOI
 MYOSMINE LF HHB
 NICOTELLINE LF WOI
 NEO-BETA-CAROTENE LF WOI
 NEOHEPTADIENE LF WOI
 NEOPHYTADIENE LF WOI
 NEOXANTHIN LF WOI
 NICOTELLINE PL JSG
 NICOTIANAMINE LF HHB
 NICOTIANANINE LF HHB
 NICOTIFLORIN LF HHB
 NICOTIFLORIN-7-GLUCOSIDE LF HHB
 NICOTIMINE LF WOI
 NICOTINE 20,000-40,000 LF WOI
 NICOTININE LF HHB
 NICOTINIC-ACID LF WOI
 NICOTOINE LF WOI
 NICOTYRINE LF WOI
 NITROGEN 20,000-40,000 LF WOI
 NONACOSANE LF WOI
 2-NONANONE LF HHB
 11-NOR-8-HYDROXY-9-DRIMENONE PL
 JSG
 15-NOR-8-ALPHA-HYDROXY-12E-
 LABDEN-14-OL PL JSG
 NORNICOTINE LF WOI
 NORSOLENESENE PL JSG
 N-OCTYLAMINE LF HHB
 OLEIC-ACID 62,500-122,500 SD HHBM
 ORNITHINE RT WOI
 OXALIC-ACID LF WOI
 1-OXO-ALPHA-CYPERONE PL JSG
 3-OXO-ALPHA-IONOL PL JSG
 OXYNICOTINE LF WOI
 PALMITIC-ACID 57,500-140,000 SD HHB
 PECTIC-ACID LF WOI
 PECTASE LF WOI
 PECTIN LF WOI
 PENTOSE LF WOI
 PEROXIDASE LF WOI
 PHENOL LF WOI
 PHENYLACETALDEHYDE LF HHB
 PHENYLACETIC-ACID LF HHB
 PHENYLCROTONIC-ACID LF HHB
 2-PHENYLETHYLAMINE LF WOI
 PHOSPHATASE LF WOI
 PHYTOSTEROLS 1,000-5,000 LF WOI
 PHYTUBEROL PL JSG
 PIPERIDINE LF WOI
 PLANTEOSE SD HHB
 PRENYLNORSOLANODIONE PL JSG
 PROP-2-ENYLMALONIC-ACID LF HHB
 PROPIONIC-ACID LF WOI
 N-PROPYLAMINE LF HHB
 N,N-PROPYLISOPROPYLAMINE LF WOI
 4-PROPYLGUAIACOL LF WOI
 PROPYL-PHENOL LF HHB
 PROTEASE LF WOI
 PURINES LF WOI
 PYRIDINE LF HHB
 1,2(BETA-PYRIDYL)PIPERIDINE-
 ANABASINE LF WOI
 3-PYRIDYLETHYLKETONE LF WOI
 3-PYRIDYLMETHYLKETONE LF WOI
 PYRROLIDINE LF WOI
 QUERCETIN FL HHB
 QUERCETIN-3-DIGLUCOSIDE FL HHB

QUERCETIN-3,3'-DIMETHYLETHER FL HHB
 QUERCETIN-3'-METHYLETHER FL HHB
 QUERCITRIN LF WOI
 QUINIC-ACID LF WOI
 RAFFINOSE LF WOI
 RHAMNOSE LF WOI
 RIBOSE LF WOI
 RUTIN 10,000 LF WOI
 RUTIN-7-GLUCOSIDE LF HHB
 SALICYLALDEHYDE LF HHB
 SCOPOLETIN LF WOI
 SCOPOLIN LF WOI
 SHIKIMIC-ACID LF WOI
 BETA-SITOSTEROL LF WOI
 BETA-SITOSTEROL-GLUCOSIDE LF WOI
 GAMMA-SITOSTEROL 100-200 LF WOI
 GAMMA-SITOSTEROL-GLUCOSIDE LF WOI
 SOCRATINES PL JSG
 SOLANASCONC PL JSG
 SOLANESOL 3,000-4,000 LF WOI
 SOLANESYL-PALMITATE LF WOI
 SOLANOFURAN LF HHB
 (+)-SOLANONE PL JSG
 SORBITOL LF WOI
 SPIROXABOVALIDE PL JSG
 STACHYOSE LF WOI
 STARCH 10,000-20,000 LF WOI
 STIGMASTEROL LF WOI
 SUCCINIC-ACID LF WOI
 SUCROSE 70,000 LF WOI
 TANNINS 30,000-60,000 LF HHB
 TEREPHTHALIC-ACID LF WOI
 TETRAHYDRO-BETA-IONONE LF HHB
 1,2,5,6-TETRAHYDROPURIDINE LF HHB
 TOBACCIC-ACIDS LF WOI
 TOCOPHEROL LF WOI
 O-TOLUIDINE LF HHB
 TRIGONELLINE SD HHB
 TRIMETHYLAMINE LF HHB
 2,4,6-TRIMETHYLANILINE LF HHB
 3,3,5-TRIMETHYL-8-ISOPROPYL-4,9-DIOXABICYCLO-(3,3,1)-NONAN-2-OL PL JSG
 3,7,13-TRIMETHYL-10-ISOPROPYL-2,6,11,13-TETRADECATETRAEN-1-AL PL JSG
 3,4,5-TRIMETHYLPHENOL LF HHB
 4-(2',2',6'-TRIMETHYL-6'-VINYL-CYCLOHEXYL)-2-BUTANONE LF HHB
 TRITIACONTANE LF HHB
 4-VINYLGUAIACOL LF WOI

VIOLAXANTHIN LF WOI
 WATER 800,000-900,000 LF WOI
 XYLENOL LF HHB
 XYLOSE RT WOI

NIGELLA SATIVA L.

"BLACK CUMIN"

ALANINE 8,000-10,255 SD ABS 1/
 ARABIC-ACID SD WOI
 ARGININE 41,500-53,050 SD ABS
 ASCORBIC-ACID 2,577 LF WOI
 ASH 38,000-53,000 SD WOI
 ASPARAGINE 0 SD WOI
 ASPARTIC-ACID 10,670-13,650 SD ABS
 CALCIUM 10,600 SD ABS
 CAMPESTEROL SD HHB
 CARBOHYDRATES 339,600 SD ABS
 CARVONE 2,250-9,600 SD WOI
 CHOLESTEROL SD HHB
 CYMENE SD WOI
 CYSTINE SD WOI
 DEHYDROASCORBIC-ACID 295 LF WOI
 EICOSADIENOIC-ACID 8,979-10,525 SD ABS
 EO 4,000-16,000 SD HHB WOI
 FAT 354,900-416,000 SD WOI
 FIBER 55,000 SD ABS
 GLUCOSE SD WOI
 GLUTAMIC-ACID 28,085-35,900 SD ABS
 GLYCINE 8,840-20,700 SD ABS
 HEDERAGENIN SD HHB
 IRON 140 SD ABS
 ISOLEUCINE 8,570-10,960 SD ABS
 LEUCINE 23,130-29,595 SD ABS
 D-LIMONENE SD WOI
 LINOLEIC-ACID 128,124-233,459 SD ABS WOI
 LINOLENIC-ACID 2,484-2,912 SD ABS HHB
 LIPASE SD WOI
 LYSINE 16,200-20,700 SD ABS
 MELANTHIGENIN SD WOI
 MELANTHIN 15,000 PL SD HHB WOI
 METHIONINE 13,100-16,750 SD ABS
 MYRISTIC-ACID 567-1,082 SD ABS WOI
 NIGELLIN SD WOI
 NIGELLONE WOI
 OLEIC-ACID 89,911-184,912 SD ABS WOI
 PALMITIC-ACID 22,464-50,523 SD ABS WOI
 PHENYLALANINE 16,850-21,560 SD ABS
 PHYTOSTEROLS 5,100 SD JAD

POTASSIUM 5,820 SD ABS
 PROLINE 11,350-14,520 SD ABS
 PROTEIN 212,600-271,900 SD ABS 1/
 RESIN SD WOI
 SERINE 4,210-5,385 SD ABS
 BETA-SITOSTEROL 3,218 SD HHB JAD
 SODIUM 980 SD ABS
 ALPHA-SPINASTEROL SD HHB
 STEARIC-ACID 8,722-10,192 SD WOI
 STIGMASTEROL SD HHB
 TANNIN SD WOI
 THREONINE 2,615-3,345 SD ABS
 THYMOHYDROQUINONE SD ABS
 THYMOQUINONE SD HHB
 TRYPTOPHAN SD WOI
 TYROSINE 12,925-16,530 SD ABS
 VALINE 6,500-8,325 SD ABS
 WATER 55,000 SD ABS 1/

1/ J.Food Sci.43: 1314, 1978.

NOTOPTERYGIUM INCISUM TING.

"QIANG HUO"

ANGELICAL RH CCO
 ARSENIC 0.13 RH CAL 1/
 CALCIUM 3,850 RH CAL
 COPPER 7 RH CAL
 IRON 280 RH CAL
 MAGNESIUM 2,980 RH CAL
 MANGANESE 39 RH CAL
 MERCURY 0.09 RH CAL
 POTASSIUM 10,200 RH CAL
 SODIUM 79 RH CAL
 ZINC 16 RH CAL

1/CAL mineral data might as well apply to
 Angelica, Aralia or Astericum (CCO)

NYSSA SYLVATICA MARSHALL

"BLACK GUM; BLACK TUPELO"

ALUMINUM 22-660 ST USG
 ALUMINUM 25-2,730 LF USG
 ASH 15,000-44,000 ST USG
 ASH 25,000-91,000 LF USG
 BARIUM 5-880 ST USG
 BARIUM 1-910 LF USG
 BORON 1-31 ST USG
 BORON 2-136 LF USG
 CALCIUM 2,850-14,520 ST USG
 CALCIUM 1,950-22,750 LF USG
 CHROMIUM 0-4.4 ST USG

CHROMIUM 0-6.37 LF USG
 COBALT 0-.66 ST USG
 COBALT 0-910 LF USG
 COPPER 0.3-31 ST USG
 COPPER 1.25-182 LF USG
 GALLIUM 0-4.4 ST USG
 IRON 33-440 ST USG
 IRON 8-1,820 LF USG
 LEAD 0.1-132 ST USG
 LEAD 0.2-182 LF USG
 MAGNESIUM 300-4,400 ST USG
 MAGNESIUM 500-9,100 LF USG
 MANGANESE 2-1,320 ST USG
 MANGANESE 12-2,730 LF USG
 MOLYBDENUM 0-0.44 ST USG
 MOLYBDENUM 0-1.4 LF USG
 NICKEL 0-22 ST USG
 NICKEL 0-188 LF USG
 PHOSPHORUS 90-1,056 ST USG
 PHOSPHORUS 300-2,184 LF USG
 POTASSIUM 870-9,240 ST USG
 POTASSIUM 2,500-25,480 LF USG
 SCANDIUM 0-0.91 LF USG
 SILVER 0-0.22 ST USG
 SILVER 0-0.18 LG USG
 STRONTIUM 10-880 ST USG
 STRONTIUM 7-910 LF USG
 TITANIUM 0.75-30.8 ST USG
 TITANIUM 0.5-182 LF USG
 VANADIUM 0.07-1.32 ST USG
 VANADIUM 0.125-4.55 LF USG
 WATER 150,000-300,000 RE HHB
 YTTERBIUM 0.03-0.31 ST USG
 YTTERBIUM 0.05-0.27 LF USG
 YTTRIUM 0.75-3.08 ST USG
 YTTRIUM 0.12-6.37 LF USG
 ZINC 6-132 ST USG
 ZINC 2-55 LF USG
 ZIRCONIUM 0.3-2.2 ST USG
 ZIRCONIUM 0.5-13.6 LF USG

OCIMUM BASILICUM L.

"BASIL"

ACETIC-ACID EO NAP
 AESCULETIN LF PMP24:193
 AESCULIN LF NAP
 ALANINE 7,470 LF USA
 CIS-ALLOOCIMENE
 TRANS-ALLOOCIMENE
 ALPHA-AMORPHENE
 ANETHOLE PL NAP
 CIS-ANETHOLE
 TRANS-ANETHOLE 11-74 PL JAD NAP

APIGENIN PL PAS
 D-ARABINOSE SD RAA
 ARGININE 6,620 LF USA
 ASCORBIC-ACID 27-612 LF CRC USA
 ASPARTIC-ACID 16,960 LF USA
 BENZYL-ALCOHOL EO NAP
 BENZYL-ACETATE 17-163 LF
 ALPHA-BERGAMOTENE EO NAP
 ALPHA-BISABOLOL EO NAP
 BORNEOL PL 411/
 BORNEOL-ACETATE 90-900 PL NAP
 BORON 18-31 PL BOB
 BETA-BOURBONENE
 XI-BULGARENE
 BUTYRIC-ACID EO NAP
 ALPHA-CADINENE PL JAD
 BETA-CADINENE PL NAP
 GAMMA-CADINENE PL NAP
 BETA-CADINOL EO NAP
 CAFFEIC-ACID 19,000 LF NAP
 CAFFEIC-ACID-n-BUTYL-ESTER 252 LF
 NAP
 CALAMENE
 CALCIUM 20,148-22,112 LF CRC USA
 CAMPHENE 0-400 PL JAD
 CAMPHOR 2-31 PL JAD NAP
 CAPROIC-ACID EO NAP
 CARBOHYDRATE 70,000-610,00 LF CRC
 USA
 BETA-CAROTENE 4-333 LF CRC USA
 CARVONE PL PAS
 CARYOPHYLLENE 18-3,196 PL JAD
 BETA-CARYOPHYLLENE 0-377 PL JAD
 NAP
 CARYOPHYLLENE-OXIDE EO NAP
 ALPHA-CEDRENE PL NAP
 BETA-CEDRENE PL JAD
 2-EPI-ALPHA-CEDRENE
 CHAVICOL-METHYL-ESTER TR EO
 NAP
 CHAVICOL-METHYL-ETHER 500-5,658
 PL JAD NAP
 CINEOLE PL NAP
 1,8-CINEOLE TR-776 PL JAD NAP
 CINNAMIC-ACID-METHYL-ESTER EO
 NAP
 CIS-CINNAMIC-ACID-METHYL-ESTER
 67-900 PL JAD NAP
 TRANS-CINNAMIC-ACID 350-7,000 PL
 JAD NAP
 TRANS-CINNAMIC-ACID-METHYL-
 ESTER 350-7,000 PL JAD NAP
 CITRAL 560-7,000 PL JAD NAP
 CITRONELLOL 3-2,419 PL JAD NAP
 COPAENE 20
 COPPER 14 LF USA
 P-COUMARIC-ACID 760 LF NAP
 ALPHA-CUBEENE
 BETA-CUBEENE
 CYCLOSATIVENE
 BETA-CYMENE 5-36 PL JAD NAP
 P-CYMENE 1-16 PL JAD
 CYSTINE 1,590 LF USA
 ALPHA-P-DIMETHYLSTYRENE
 BETA-ELEMENE EO NAP
 ELEMOL EO NAP
 EO 1,500-10,000 PL
 1-EPI-BICYCLOSQUIPHELLANDRENE
 PL JSG
 ERIODICTYOL LF PMP24:193
 ERIODICTYOL-7-O-GLUCOSIDE LF
 PMP24:193
 ESTRAGOLE 35-9,000 PL JAD NAP
 EUGENOL 35-8,575 LF JAD NAP
 EUGENOL-METHYL-ETHER 375-2,500
 PL JAD NAP
 ALPHA-FARNESENE
 FARNESOL
 FAT 35,752-43,680 LF CRC USA
 ALPHA-FENCHENE EO NAP
 FENCHYL-ACETATE 1-60
 FENCHYL-ALCOHOL 9-951
 FENCHONE
 FIBER 145,790-154,290 LF CRC USA
 FURFURAL
 D-GALACTOSE SD RAA
 D-GALACTURONIC-ACID SD RAA
 GERANIAL 560-3,750 PL JAD NAP
 GERANIOL 1-1,000 PL JAD NAP
 GERANYL-ACETATE 11-84 LF JAD
 D-GLUCOSE SD RAA
 GLUTAMIC-ACID 15,650 LF USA
 ALPHA-GUAIENE
 DELTA-GUAIENE
 GLYCINE 6,900 LF USA
 GAMMA-GURJUNENE
 CIS-3-HEXENOL
 HISTIDINE 2,870 LF USA
 HUMULENE EO NAP
 ALPHA-HUMULENE 47-313 PL JAD NAP
 HYDROXY-BENZOIC-ACID-4-BETA-D-
 GLUCOSIDE LF NAP
 IRON 362-478 LF CRC USA
 ISOCARYOPHYLLENE
 ISOEUGENOL 8-95
 ISOEUGENOL-METHYL-ETHER PL PAS
 ISOLEUCINE 5,880 LF USA
 ISOQUERCITRIN LF NAP

- JUVOCIMENE-I 0.007-0.05 PL JAD NAP
 JUVOCIMENE-II 0.007-0.05 PL JAD NAP
 KAEMPFEROL LF NAP
 KAEMPFEROL3-O-BETA-D-RUTINOSIDE
 LF NAP
 LEDENE
 LEUCINE 10,780 LF USA
 LIMONENE 2-934 PL JAD NAP
 CIS-LIMONENE 30-933 PL JAD NAP
 LINALOOL 5-8,730 PL BML 411/
 (-)-LINALOOL 30-300 PL JAD NAP
 LINALYL-ACETATE 15-240 PL JAD
 LINOLEIC-ACID SD NAP
 LINOLENIC-ACID SD NAP
 LUTEOLIN PL PAS
 LYSINE 6,180 LF USA
 MAGNESIUM 4,100-4,340 LF USA
 MANGANESE 32 LF USA
 D-MANNOSE SD RAA
 D-MANNURONIC-ACID SD RAA
 MENTHOL 4-32 PL JAD NAP
 MENTHONE 1 PL JAD NAP
 METHIONINE 2,020 LF USA
 P-METHOXYCINNAMALDEHYDE 1,000-
 4,000 EO(FL) NAP
 METHYL-CHAVICOL 238-8,780
 METHYL-CINNAMATE 1-2,800
 METHYL-EUGENOL 13-1,400
 MUCILAGE 93,000 SD JAD NAP
 ALPHA-MUUROLENE PL JAD
 GAMMA-MUUROLENE PL NAP
 MYRCENE 2-80 LF JAD
 BETA-MYRCENE PL NAP
 NEROL 15-300 PL JAD NAP
 NEROLIDIOL EO NAP
 NEROLIDOL EO JAD
 NIACIN 8-69 LF CRC USA
 BETA-OCIMENE 1-435 PL JAD
 CIS-OCIMENE 3-252 PL JAD
 TRANS-OCIMENE 8-161 PL JAD NAP
 OCTANOL
 3-OCTANONE
 1-OCTEN-3-OL
 OLEANOLIC-ACID 1,300 FL NAP
 OLEIC-ACID SD NAP
 ORIENTIN PL PAS
 PALMITIC-ACID SD NAP
 PHELLANDRENE PL 411/
 PHENYLETHYL-ALCOHOL 18-136
 PHOSPHORUS 4,632-5,168 LF CRC USA
 PHYTOSTEROLS 1,060 LF USA
 ALPHA-PINENE 2-180 PL JAD NAP
 BETA-PINENE 3-160 PL JAD NAP
 PLANTEOSE SD NAP
 POTASSIUM 32,321-42,900 LF CRC USA
 PROLINE 5,880 LF USA
 PROPIONIC-ACID EO NAP
 PROTEIN 118,550-169,850 LF CRC USA
 QUERCETIN LF NAP
 QUERCETIN-3-O-DIGLUCOSIDE LF NAP
 L-RHAMNOSE SD RAA
 RIBOFLAVIN 3-4 LF CRC USA
 ROSMARINIC-ACID 1,000-1,300 PL JAD
 NAP
 ROSMARINIC-ACID 19,000 SH APF48:103
 RUTIN LF NAP
 SABINENE PL 411/
 TRANS-SABINENE-HYDRATE
 CIS-SABINENE-HYDRATE
 SAFROLE 60-400 PL JAD NAP
 SALICYLIC-ACID-2-BETA-D-GLU-
 COSIDE LF NAP
 SAMBULENE LF NAP
 ALPHA-SANTALENE EO NAP
 BETA-SANTALENE EO NAP
 ALPHA-SELINENE
 BETA-SELINENE
 SERINE 5,610 LF USA
 SESQUITHUJENE
 BETA-SITOSTEROL 1,051 FL NAP
 BETA-SITOSTEROL 896-1,705 LF NAP
 BETA-SITOSTEROL 408 RT NAP
 BETA-SITOSTEROL 230 SP NAP
 BETA-SITOSTEROL 230 ST NAP
 SODIUM 294-386
 STEARIC-ACID SD NAP
 STIGMASTEROL PL PAS
 SUCCINIC-ACID PL PAS
 SYRINGIC-ACID-4-BETA-D-GLUCOSIDE
 LF NAP
 SYRINGOYL-GLUCOSE LF NAP
 TANNIN TC NAP
 ALPHA-TERPINENE 1-10 PL JAD
 GAMMA-TERPINENE 1-10 PL JAD
 TERPINEN-4-OL 2-120 PL JAD NAP
 ALPHA-TERPINEOL 36-239 PL JAD NAP
 TERPINOLENE 1-22
 ALPHA-TERPINYL-ACETATE
 THIAMIN 1 LF USA
 THREONINE 5,880 LF USA
 ALPHA-THUJONE
 BETA-THUJONE
 THYMOL 1,415 LF NAP
 TRICYCLENES EO NAP
 TRYPTOPHAN 2,210 LF USA
 TYROSINE 4,320 LF USA

UNDECYLALDEHYDE 0
 URSOLIC-ACID 1,740 FL NAP
 URSOLIC-ACID 413-1,143 LF NAP
 URSOLIC-ACID 63 SP NAP
 URSOLIC-ACID 845 ST NAP
 VALERIC-ACID EO NAP
 VALINE 7,170 LF USA
 VANILLIC-ACID-4-BETA-D-GLUCOSIDE
 LF NAP
 VICENIN-2 LF PMP24:193
 XANTHOMICROL 350 LF NAP
 XYLOSE SD RAA
 ZINC 5-6 LF USA

OCOTEA GLAZIOVII L.

“OCOTEA”

3,5-DIHYDROXY-6-
 METHOXYAPORPHINE PL ALK
 GLAZIOVINE PL ALK

OENANTHE AQUATICA (L.) POIR.

“WATER FENNEL”

“WATER HEMLOCK”

ANDROL FR GEO
 APIOLE FR HHB
 CAMPHENE FR GEO
 EO 10,000-25,000 FR HHB
 FAT 200,000 FR HHB
 GALACTOSE FR HHB
 4-ISOPROPYL-2-CYCLOHEXEN-1-OL?
 FR GEO
 4-ISOPROPYL-2-CYCLOHEXEN-1-ONE
 FR GEO
 MANNOSE FR HHB
 MYRICETIN PL 411/
 MYRISTICIN FR HHB
 N-1-NONEN-3-OL FR GEO
 N-2-NONEN-1-OL? FR GEO
 OENANTHETOXIN PL 411/
 TRANS-PENTADECAC-7,13-DIENE-9,11-
 DIYN-1-OL PL JSG
 PHELLANDRAL FR GEO
 BETA-PHELLANDRENE 8,000-20,000 FR
 GEO HHB
 PINENE? FR GEO
 RESIN 40,000 FR HHB
 RHAMNETIN PL 411/
 SABINENE? FR GEO
 TRICETIN PL 411/
 N-4-UNDECEN-3-OL? FR GEO
 WAX 20,000-30,000 FR HHB

OENANTHE CROCATA L.

“WATER DROPWORT”

APIOLE RT HHB
 2,3-DIHYDRO-OENANTHETOXIN RT
 411/
 ALL-TRANS-HEPTADECATRIEN-(2,8,10)-
 DIIN-(4,6) RH HHB
 MANNITOL RT HHB
 MYRISTICIN PL HHB
 OENANTHETOL RT HHB
 OENANTHETONE RT HHB
 OENANTHETOXIN RT 411/
 PECTIC-ACID PL HHB
 TRANS-PENTADECADIEN-2,8-DIENE-
 4,6-DIYN-1-OL PL JSG
 TRANS-PENTADECAC-2,8,10-TRIENE-4,6-
 DIYN PL JSG
 TRANS-PENTADECAC-2,8,10-TRIENE-4,6-
 DIYN-12-OL PL JSG
 ALL-TRANS-PENTADECATRIEN-2,8,10-
 DIIN-(4,6) RH HHB

OENANTHE JAVANICA (BLUME)
 DC.

“JAVAN WATER DROPWORT”

CAMPHENE SH CCO
 CARVACROL SH CCO
 N-DOCOSANE SH CCO
 N-1-DOCOSANOL SH CCO
 N-EICOSANE SH CCO
 N-1-EICOSANOL SH CCO
 EUGENOL SH CCO
 D-GALACTOSAMINE RT CCO
 N-HENEICOSANE SH CCO
 N-HEPTACOSANE SH CCO
 N-HEPTADECANE SH CCO
 N-HEXACOSANE SH CCO
 N-HEXADECANE SH CCO
 ISORHAMNETIN SH CCO
 MYRISTICIN FR CCO
 N-NONADECANE SH CCO
 N-NONACOSANE SH CCO
 N-OCTACOSANE SH CCO
 N-OCTADECANE SH CCO
 PALMITIC-ACID RT CCO
 N-PENTACOSANE SH CCO
 N-PENTADECANE SH CCO
 PETROSELENIC-ACID FR CCO
 BETA-PINENE SH CCO
 STIGMASTEROL RT CCO

N-TETRACOSANE SH CCO
 N-TETRACOSANE SH CCO
 N-TRICOSANE SH CCO

OENOTHERA BIENNIS L.

"EVENING-PRIMROSE"

ALANINE 5,500-5,870 SD ABS 1/
 AMMONIA 2,300-2,455 SD ABS 1/
 ALPHA-AMYRIN 125-266 SD ABS 2/
 BETA-AMYRIN 47-100 SD ABS 2/
 ARGININE 14,100-15,048 SD ABS 1/
 ASH 47,800-78,000 SD ABS 1,2/
 ASPARTIC-ACID 11,800-12,593 SD ABS 1/
 BORON 38-41 SD ABS 1/
 CAFFEIC-ACID LF
 CALCIUM 12,100-23,400 PL
 CALCIUM 12,700-18,000 SD ABS 1,2/
 CAMPESTEROL 103-220 SD ABS 2/
 CARBOHYDRATES 460,000-671,000 PL
 CARBOHYDRATES
 CELLULOSE 270,000 SD ABS 2/
 CITROSTADIENIOL 115-246 SD ABS 2/
 COPPER 11-13 SD ABS 1,2/
 O-COUMARIC-ACID
 P-COUMARIC-ACID LF
 CYCLOARTENOL 62-133 SD ABS 2/
 CYSTINE 3,400-3,629 SD ABS 1/
 DELPHINIDIN LF
 DIGALLIC-ACID LF
 ELLAGIC-ACID LF
 FAT 150,000-320,000 SD
 FAT 23,000-43,000 PL
 FIBER 156,000-234,000 PL
 FIBER 429,000 SD 2/
 GALLIC-ACID LF
 GLUTAMIC-ACID 26,300-28,068 SD
 ABS 1/
 GLYCINE 10,500-11,206 SD ABS 1/
 GRAMISTEROL 36-77 SD ABS 2/
 HISTIDINE 3,700-3,949 SD ABS 1/
 IRON 94-390 SD ABS 1,2/
 ISOLEUCINE 4,100-5,870 SD ABS 1,2/
 KAEMPFEROL LF
 LEUCINE 8,700-10,780 SD ABS 1,2/
 LIGNIN 160,000 SD ABS 2/
 LINOLEIC-ACID 121,500-227,798 SD ABS
 1,2/
 ALPHA-LINOLEIC-ACID 39,000-58,000
 SD
 BETA-LINOLEIC-ACID 42,000-66,000 SD
 GAMMA-LINOLENIC-ACID 4,860-48,600
 SD ABS 1,2/
 LYSINE 3,100-3,842 SD ABS 1,2/

MAGNESIUM 2,700-3,900 HE
 MAGNESIUM 4,300-5,300 SD ABS 1,2/
 MANGANESE 5-168 SD ABS 1,2/
 METHIONINE 5,400-5,763 SD ABS 1/
 METHYLENE-CYCLOARTENOL 20-42
 SD ABS 2/
 MUCILAGE
 NEOCHLOROGENIC-ACID LF
 OBTUSIFOLIOL 26-56 SD ABS 2/
 CIS-6,9,12-OCTADECATRIENOIC-ACID
 PL JSG
 OENOTHERIN
 OLEIC-ACID 15,000-50,000 SD
 PALMITIC-ACID 7,500-31,590 SD
 ABS 1,2/
 PHENYLALANINE 6,900-7,364 SD ABS 1/
 PHLOBAPHENE
 PHOSPHORUS 1,700-3,700 PL
 PHOSPHORUS 4,100-7,257 SD ABS 1,2/
 PHYTOSTEROL
 POTASSIUM 12,700-35,100 HE CCF
 POTASSIUM 4,600-7,577 SD ABS 1,2/
 PROLINE 5,900-6,297 SD ABS 1/
 PROTEIN 150,000-176,054 CFC ABS 1/
 QUERCETIN LF 91,000-207,000 HE
 RESIN
 SERINE 8,300-8,858 SD ABS 1/
 BETA-SITOSTEROL 1,186-2,528 SD
 ABS 2/
 SODIUM 180 SD ABS 2/
 STARCH SD ABS 2/
 STEARIC-ACID 1,875-12,150 SD ABS 1,2/
 TANNIN 110,000 HE
 THREONINE 3,500-4,600 SD ABS 1,2/
 ALPHA-TOCOPHEROL 11-24 SD ABS 2/
 GAMMA-TOCOPHEROL 28-60 SD ABS 2/
 TRYPTOPHAN 2,400-16,000 SD ABS 1,2/
 TYROSINE 3,400-3,629 SD ABS 1/
 VALINE 5,200-8,645 SD ABS 1,2/
 WATER 63,000-83,000 SD ABS 1,2/
 ZINC 70-90 SD ABS 1,2/

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 61:540-3.1984.

OLEA EUROPAEA L.

"OLIVE"

D-ACETOXPINORESINOL ST RAA
 D-1-ACETOXPINORESINOL-4'-BETA-D-
 GLUCOSIDE ST CCO
 D-1-ACETOXPINORESINOL-4"-O-
 METHYL-ETHER ST RAA

AESCULETIN ST CCO
 AESCULIN ST CCO
 BETA-AMYRIN LF CCO
 APIGENIN LF RAA
 APIGENIN-7-GLUCOSIDE LF HHB
 APIGENIN-7-DI-O-XYLOSIDE LF RAA
 ARABINOSE FR HHB
 ARACHIDIC-ACID 300-800 FR WOI
 ASH 64,000-294,000 FR CRC
 ASH 61,000 LF CRC
 ASH 85,000 TW CRC
 BORON 1-4 FR BOB
 CAFFEIC-ACID FR HHB
 1-CAFFEYL-GLUCOSE FR RAA
 CALCIUM 610-2,798 FR CRC
 CALCIUM 11,800 LF CRC
 CARBOHYDRATES 13,000-60,000 FR CRC
 CARBOHYDRATES 735,000 LF CRC
 CARBOHYDRATES 765,000 TW CRC
 BETA-CAROTENE 1.8-8.3 FR CRC
 CATECHIN FR HHB
 CATECHOL-MELANIN FR HHB
 CHOLINE LF HHB
 CHRYSOERIOL-7-O-GLUCOSIDE LF RAA
 CINCHONIDINE LF HHB
 CINCHONINE LF RAA
 P-COUMARIC-ACID FR HHB
 CRATAEGOLIC-ACID FR HHB
 CYANIDIN-3-GLUCOSIDE FR HHB
 CYANIDIN-3-MONOGLUCOSIDE PC RAA
 CYANIDIN-3-RHAMNOSYLGLUCOSYL-GLUCOSIDE FR HHB
 CYANIDIN-3-RUTINOSIDE FR HHB
 (+)-CYCLO-OLIVIL BR RAA
 DEMETHYLOLEOEUROPEIN LF RAA
 DIHYDROCINCHONINE LF RAA
 3,4-DIHYDROXYPHENYLETHANOL-4-DIGLUCOSIDE FR RAA
 3,4-DIHYDROXYPHENYLETHANOL-4-MONOGLUCOSIDE FR RAA
 3,4-DIHYDROXYPHENYLETHYL-ALCOHOL FR HHB
 DIHYDROXYPHENYLPROPANE LF HHB
 ELENOLIDE FR RAA
 ERYTHRODIOL PC RAA
 ESCULETIN ST RAA
 ESCULIN ST RAA
 ESTRONE SD CCO
 FAT 127,000-583,000 FR CRC
 FAT 73,000 LF CRC
 FAT 300,000 SD HHB
 FAT 61,000 TW CRC
 FIBER 13,000-60,000 FR CRC
 FIBER 177,000 LF CRC
 FIBER 289,000 TW CRC
 FRUCTOSE FR HHB
 GALACTOSE FR HHB
 GALACTURONIC-ACID FR HHB
 GLUCOSE FR HHB
 D-1-HYDROXYPINORESINOL ST RAA
 D-1-HYDROXYPINORESINOL-4"-O-METHYL-ETHER ST RAA
 IRON 16-73 FR CRC
 KAEMPFEROL ST CCO
 KILOCALORIES 1,160-5,320 FR CRC
 LIGUSTROLIDE FR RAA
 LINOLEIC-ACID 10,500-28,000 FR WOI
 LUTEOLIN LF HHB
 LUTEOLIN-4'-O-GLUCOSIDE LF RAA
 LUTEOLIN-5-O-GLUCOSIDE FR RAA
 LUTEOLIN-7-O-GLUCOSIDE LF RAA
 LUTEOLINTETRAGLUCOSIDE LF HHB
 MANNITOL LF HHB
 MASLINIC-ACID FR HU HHB
 METHYL-DELTA-MASLINATE LF CCO
 MYRISTIC-ACID 300-800 FR WOI
 OLEANOLIC-ACID FR HU HHB
 OLEIC-ACID 122,400-326,400 FR WOI
 OLEOSIDE LF RAA
 OLEOSIDE-7-METHYL-ESTER BK RAA
 OLEUROPEIC-ACID RT BK RAA
 OLEUROPEIN PL HHB
 L-OLIVIL RE CCO
 OLIVIN LF HHB
 OLIVIN-4'-DIGLUCOSIDE LF HHB
 PAEONIDIN-3-GLUCOSIDE FR HHB
 PAEONIDIN-3-RHAMNOSYLGLUCOSYLGLUCOSIDE FR HHB
 PALMITIC-ACID 14,250-38,000 FR WOI
 PECTIN FR HHB
 PHOSPHORUS 170-780 FR CRC
 PHOSPHORUS 900 LF CRC
 POTASSIUM 550-2,523 FR CRC
 PROTEIN 14,000-64,000 FR CRC
 PROTEIN 131,000 LF CRC
 PROTEIN 89,000 TW CRC
 PROTOCATECHUIC-ACID FR HHB
 QUERCETIN ST HHB
 QUERCETIN-3-O-RHAMNOSIDE PC RAA
 QUERCETIN-3-RUTINOSIDE PC RAA
 QUINONE FR HHB
 RHAMNOSE FR HHB

RUTIN PC RAA
 BETA-SITOSTEROL-GLUCOSIDE LF
 RAA
 SODIUM 24,000-110,092 FR CRC 1/
 SQUALENE FR HHB
 STEARIC-ACID 2,100-5,600 FR WO
 TANNINS LF RAA
 ALPHA-TOCOPHEROL 119 OI TOT
 GAMMA-TOCOPHEROL 13 OI TOT
 UVAOL PC RAA
 VERBASCOSIDE FR HHB
 WATER 782,000 FR CRC

1/Probably externally applied salt.

OPHIOPOGON JAPONICUS
 KER-GAWL.

“MAI-MEN-TUNG;
 MAI-MEN-DONG”

ARSENIC 0.05 TU CAL
 CALCIUM 870-3,450 TU CAL SMO
 COPPER 3-4 TU CAL SMO
 DESMETHYLOPHIOPOGONONE-B TU
 CCO
 DOTRIACONTANOL PL JSG
 D-FRUCTOSE TU CCO
 D-GLUCOSE TU CCO
 IRON 70-340 TU CAL SMO
 ISOOPHIOPOGONONE-A TU CCO
 KAEMPFEROL-3-
 GLUCOSYLGALACTOSIDE TU CCO
 MAGNESIUM 390-410 TU CAL SMO
 MANGANESE 5-27 TU CAL SMO
 METHYLOPHIOPOGONANONE-A TU
 CCO
 METHYLOPHIOPOGONANONE-B TU
 CCO
 METHYLOPHIOPOGONONE-A TU CCO
 METHYLOPHIOPOGONONE-B TU CCO
 MUCILAGE TU HHB
 OCTACOSANOL PL JSG
 OLIGOSACCHARIDE-A TU CCO
 OLIGOSACCHARIDE-B TU CCO
 OLIGOSACCHARIDE-C TU CCO
 OPHIOPOGON-A TU CCO
 OPHIOPOGON-B TU CCO
 OPHIOPOGON-B' TU CCO
 OPHIOPOGON-C TU CCO
 OPHIOPOGON-C' TU CCO
 OPHIOPOGON-D TU CCO
 OPHIOPOGON-D' TU CCO
 OPHIOPOGONANONE-A TU CCO
 OPHIOPOGONIN-A RT CCO

OPHIOPOGONIN-B RT CCO
 OPHIOPOGONIN-C RT CCO
 OPHIOPOGONIN-C' RT CCO
 OPHIOPOGONIN-D RT CCO
 OPHIOPOGONIN-D' RT CCO
 OPHIOPOGONONE-A TU CCO
 OPHIOPOGONONE-B TU CCO
 POTASSIUM 8,580-10,600 TU CAL SMO
 RHAMNOSE TU HHB
 RUSCOGENIN TU HHB
 BETA-SITOSTEROL TU CCO
 BETA-SITOSTEROL-BETA-D-GLU-
 COSIDE TU CCO
 SODIUM 113-273 TU CAL SMO
 STIGMASTEROL TU HHB
 SUCROSE TU CCO
 TRIACONTANOL PL JSG
 ZINC 7-16 TU CAL SMO

1/ Tuber eaten as food (WOI)

OPOPANAX CHIRONIUM (L.)

Koch

“OPOPANAX;
 HERCULES ALL HEAL”

CIS-BERGAMOTENE EO HHB
 TRANS-BERGAMOTENE EO HHB
 BISABOLENE EO HHB
 DELTA-CADINENE EO HHB
 GAMMA-CADINENE EO HHB
 ALPHA-COPAENE EO HHB
 ALPHA-CUBEBENE EO HHB
 DIHYDROOENANTHETOL PL HHB
 2,3-DIHYDROOENANTHETOLACETATE
 PL HHB
 BETA-ELEMENE EO HHB
 DELTA-ELEMENE EO HHB
 EO 30,000-65,000 RE HHB WO
 DIIN-DIENE-FALCARINOL PL HHB
 EN-DIIN-DIENE-FALCARINOL PL HHB
 FALCARINDIONE RT HHB
 FALCARINOLONE RT HHB
 FALCARINONE RT HHB
 FERULIC-ACID RE HHB
 HUMULENE EO HHB
 GAMMA-MUUROLENE EO HHB
 OENANTHETOL PL HHB
 OPORESINOTANNOL RE HHB
 ALPHA-PANAX-RESIN RE HHB
 BETA-PANAX-RESIN RE HHB
 RESIN 190,000 HHB
 ALPHA-SANTALENE EO HHB
 UMBELLIFERONE EO HHB

OPUNTIA FICUS-INDICA (L.)
MILL.

“INDIAN FIG”

ALANINE 7,180 BD JEL
 ALANINE 8,480 SD JEL
 ARABINOSE GU HHB
 ARGININE 4,955 BD JEL
 ARGININE 27,100 SD JEL
 ASCORBIC-ACID 65-1,690 FR CRC JEL
 RAA
 ASH 235,000 BD JEL
 ASH 3,000-27,000 FR CRC JEL
 ASH 31,700-241,000 SD CRC JEL
 ASPARTIC-ACID 8,315 BD JEL
 ASPARTIC-ACID 15,900 SD JEL
 BETANIN FR HHB
 CALCIUM 560 BE JEL
 CALCIUM 180-3,065 FR CRC JEL
 CALCIUM-OXALATE FR ABS
 CARBOHYDRATES 118,600 BD JEL
 CARBOHYDRATES 56,000-892,000 FR
 CRC JEL
 CARBOHYDRATES 482,000-558,000 SD
 CRC JEL
 BETA-CAROTENE 0.3 BD JEL
 BETA-CAROTENE 0.08-0.09 FR RAA
 CELLULOSE 13,000 FR HHB
 CITRIC-ACID 475-4,560 FR JEL
 COPPER 3.4 SD JEL
 CYSTEINE 5,740 SD JEL
 DEHYDROASCORBIC-ACID 30 FR JU
 RAA
 FAT 24,800 BD JEL
 FAT 4,000-29,400 FR CRC JEL
 FAT 54,000-182,000 SD CRC JEL
 FIBER 89,400 BD JEL
 FIBER 11,000-59,000 FR CRC JEL
 FIBER 111,000-524,000 SD CRC JEL
 FRUCTOSE 4,500-44,100 FR JEL
 GALACTOSE GU RAA
 GALACTURONIC-ACID ST PC18:569
 GLUCOSE 50-480 FR JEL
 GLUTAMIC-ACID 16,000 BD JEL
 GLUTAMIC-ACID 37,500 SD JEL
 GLYCINE 4,745 BD JEL
 GLYCINE 14,200 SD JEL
 HISTAMINE 2,555 BD JEL
 HISTAMINE 4,550 SD JEL
 INDICAXANTHIN FR HHB
 IRON 12-65 FR CRC JEL
 IRON 100 SD JEL
 ISOBETANIN FR HHB

ISOLEUCINE 4,140 BD JEL
 ISOLEUCINE 6,775 SD JEL
 ISORHAMNETIN-GLUCOSIDE FL HHB
 KAEMPFEROL FL RAA
 KCAL 1,140 BD JEL
 KCAL 670-3,600 FR CRC JEL
 LEUCINE 7,040 SD JEL
 LEUCINE 12,800 SD JEL
 LINOLEIC-ACID 39,640-133,590 SD
 JFS47:2060
 LINOLEOYLDIOLEIN SD RAA
 LUTEOLIN FL RAA
 LYSINE 6,005 BD JEL
 LYSINE 6,275 SD JEL
 MAGNESIUM 1,420 BD JEL
 MAGNESIUM 790 SD JEL
 MALIC-ACID 180-1,700 FR JEL
 METHIONINE 1,890 BD JEL
 METHIONINE 4,830 SD JEL
 NEOBETANIN PL JSG
 NIACIN 4.6 BD JEL
 NIACIN 3-27 FR CRC JEL
 OPUNTIA XANTHIN FR HHB
 OLEIC-ACID 4,750-16,015 SD JFS47:2060
 PALMITIC-ACID 6,480-21,840 SD
 JFS47:2060
 PALMITOYLDILINOLEIN SD RAA
 PECTIN FR WOI
 PENDULETIN FL RAA
 PHENYLALANINE 4,250 BD JEL
 PHENYLALANINE 8,255 SD JEL
 PHOSPHORUS 243 BD JEL
 PHOSPHORUS 320-1,985 FR CRC JEL
 PHOSPHORUS 1,605 SD JEL
 PISCIDIC-ACID PL JSG
 PISCIDIC-ACID-DIETHYLETHER FL
 HHB
 PISCIDIC-ACID-METHYLESTER FL HHB
 PISCIDIC-ACID-MONOETHYLETHER FL
 HHB
 POTASSIUM 2,600 BD JEL
 POTASSIUM 700-6,615 FR JEL
 POTASSIUM 1,720 SD JEL
 PROLINE 3,995 BD JEL
 PROLINE 10,500 SD JEL
 PROTEIN 110,300 BD JEL
 PROTEIN 11,000-73,500 FR CRC JEL
 PROTEIN 121,000-175,300 SD CRC JEL
 QUERCITRIN FL RAA
 QUINIC-ACID 150-1,400 FR JEL
 RHAMNOSE GU HHB
 RIBOFLAVIN 0.6 BD JEL
 RIBOFLAVIN 0.2-2.2 FR CRC JEL
 RUTIN FL RAA

SERINE 3,830 BD JEL
 SERINE 7,665 SD JEL
 SHIKIMIC-ACID 25-220 FR JEL
 BETA-SITOSTEROL FL HHB
 SODIUM 90 BD JEL
 SODIUM 714 SD JEL
 STEARIC-ACID 3,130-10,555 SD
 JFS47:2060
 SUCROSE 0 FR JEL
 SUGARS 56,000-560,000 FR WOI
 THIAMIN 0.1 BD JEL
 THIAMIN 0.1-1.3 FR CRC JEL
 THREONINE 3,845 BD JEL
 THREONINE 7,330 SD JEL
 TOCOPHEROL 2.5 BD JEL
 TRYPTOPHAN 1,665 SD JEL
 TYROSINE 3,220 BD JEL
 TYROSINE 6,590 SD JEL
 URONIC-ACID GU RAA
 VALINE 5,485 BD JEL
 VALINE 10,500 SD JEL
 VIT-D 0.07 BD JEL
 WATER 952,600 BD JEL
 WATER 814,000-864,00 FR CRC JEL
 WATER 53,000-136,000 SD CRC JEL
 XYLOSE GU HHB
 ZINC 15 SD JEL

ORIGANUM CRETICUM L.

“DITTANY OF CRETE”

CAMPHOR PL HHB
 CARVACROL PL HHB
 CEDROL PL HHB
 P-CYMOL PL HHB
 EO 14,000-30,000 PL HHB
 LINALOOL PL HHB
 PINENE PL HHB
 TANNIN PL HHB

ORIGANUM MAJORANA L.

“MARJORAM”

TRANS-ANETHOLE 8-43 PL BML
 APIGENIN-7-GLUCOSIDE PL 411/
 ALLO-AROMADENDRENE PL BML
 ASCORBIC-ACID 514-555 PL USA
 ASH 96,900-123,300 PL USA WOI
 BICYCLOGERMACRENE 12-69 PL BML
 BORON 28-48 PL BOB
 CADINENE PL HHB
 CAFFEIC-ACID PL HHB

CALCIUM 17,925-23,625 PL USA
 CARBOHYDRATES 605,600-654,050 PL
 USA
 DELTA-3-CARENE PL HHB
 BETA-CAROTENE 48-52 PL USA
 CARVACROL 1,092-6,261 PL WOI
 CARVONE 12-69 PL BML
 BETA-CARYOPHYLLENE PL HHB
 CARYOPHYLLENE 52-1,307 PL BML
 WOI
 CHAVICOL 138-791 PL WOI
 CITRAL PL HHB
 ALPHA-COPAENE PL BML
 COPPER 11 PL USA
 P-CYMEN-8-OL 8-43 PL BML
 P-CYMENE 21-120 PL BML
 DINATIN-7-GLUCOSIDE LF
 DIOSMETIN-7-GLUCOSIDE LF 411
 GAMMA-ELEMENE PL BML
 EO 3,000-17,200 PL WOI
 ESTRAGOLE PL 411/
 1-ETHOXY-P-MENTH-2-ENE PL BML
 4-ETHOXY-P-MENTH-1-ENE
 CIS-3-ETHOXY-P-MENTH-1-ENE
 TRANS-3-ETHOXY-P-MENTH-1-ENE
 TRANS-4-ETHOXY-THUJANE PL BML
 CIS-4-ETHOXY-THUJANE PL BML
 ETHYL-CAPRATE PL BML
 ETHYL-LAURATE PL BML
 ETHYL-LINOLEATE PL BML
 ETHYL-LINILENATE PL BML
 ETHYL-MYRISTATE PL BML
 ETHYL-OLEATE PL BML
 ETHYL-PALMITATE PL BML
 ETHYL-STEARATE PL BML
 ETHYL-TRANSHEXADECANOATE PL
 BML
 EUGENOL 200-1,152 PL WOI
 BETA-FARNESENE PL BML
 FAT 8,000-77,950 PL USA
 FIBER 170,170-220,600 PL USA WOI
 GERANIOL PL BML
 GERANYL-ACETATE 12-69 PL HHB
 ALPHA-HUMULENE PL BML
 HYDROQUINONE
 ALPHA-HYDROXYDIHYDROCAFFEIC-
 ACID PL HHB
 IRON 750-975 PL USA
 LEDENE PL BML
 LIMONENE 18-103 PL BML
 D-LINALOOL 918-5,263 PL WOI
 LINALOOL 99-568 PL BML
 LINALYL-ACETATE 3-17 PL BML

LINOLEIC-ACID 10,000 SD HHB
 LINOLENIC-ACID 27,500 SD HHB
 LUTEOLIN-7-GLUCOSIDE PL 411/
 MAGNESIUM 3,300-3,900 PL USA
 MAJARONIN LF HHB
 MANGANESE 54 PL USA
 CIS-P-MENTH-2-EN-1-OL 60-344 PL BML
 TRANS-P-MENTH-2-EN-1-OL 52-301 PL
 BML
 METHYL-CHAVICOL 96-550 PL WOI
 MYRCENE 18-103 PL BML
 NERYL-ACETATE PL BML
 NIACIN 41-44 PL USA
 OLEANOLIC-ACID 4,700 PL HHB
 OLEIC-ACID 8,000 SD HHB
 PENTOSANS 70,000-76,800 PL HHB WOI
 ALPHA-PHELLANDRENE 18-103 PL
 BML
 BETA-PHELLANDRENE 27-155 PL BML
 PHENOL 1,431-8,204 PL WOI
 PHOSPHORUS 2,670-3,725 PL USA
 PHYTOSTEROLS 600-650 PL USA
 ALPHA-PINENE 15-86 PL BML
 BETA-PINENE 6-34 PL BML
 TRANS-PIPERITOL 9-52 PL BML
 PLANTEOSE SD HHB
 POTASSIUM 14,500-17,225 PL USA
 PROTEIN 121,450-143,100 PL USA WOI
 RIBOFLAVIN 3 PL USA
 ROSMARINIC-ACID 33,000 PL FT62:166
 SABINENE 75-430 PL BML HHB
 TRANS-SABINENE-HYDRATE 30-172 PL
 BML HHB
 SAPONIN PL HHB
 BETA-SITOSTEROL (4.6%) HHB
 SODIUM 675-935 PL USA
 TANNIN PL WOI
 TERPINEN-4-OL 1,365-7,826 PL BML
 ALPHA-TERPINENE 183-1050 PL BML
 TERPINENE PL HHB
 TERPINEN-4-YL-ACETATE PL BML
 D-ALPHA-TERPINEOL 144-826 PL WOI
 TERPINENOL PL WOI
 TERPINOLENE 75-430 PL BML
 ALPHA-TERPINYL-ACETATE PL BML
 THIAMIN 3 PL USA
 ALPHA-THUJENE 15-86 PL BML
 N-TRIACONTANE (18.2%) PL HHB
 URSOLIC-ACID 500-2,100 PL WOI
 URSOLIC-ACID-I 4,700 PL HHB
 URSOLIC-ACID-II 1,200 PL HHB
 WATER 74,920-77,880 PL USA
 ZINC 32-43

ORIGANUM ONITES L.

"POT MARJORAM"

BETA-BISABOLENE 246 PL BML
 BORNEOL 315 PL BML
 BORON 28-48 PL BOB
 CAMPHENE 28 PL BML
 CARVACROL 8,310 PL BML
 CARVONE TR PL BML
 CARYOPHYLLENE 82 PL BML
 1,8-CINEOLE 23 PL BML
 P-CYMENE 227 PL BML
 LIMONENE 17 PL BML
 LINALOOL 39 PL BML
 MYRCENE 41 PL BML
 PENTYL-ALCOHOL TR PL BML
 ALPHA-PINENE 16 PL BML
 BETA-PINENE 3 PL BML
 CIS-SABINENE-HYDRATE 4 PL BML
 TERPINEN-4-OL 144 PL BML
 ALPHA-TERPINENE 47 PL BML
 GAMMA-TERPINENE 190 PL BML
 ALPHA-THUJENE 16 PL BML
 THYMOL 86 PL BML

Based on an assumption of 1% EO (=10,000
 ppm) and the assumption BML is right in
 equating Turkish oregano and Origanum
 smyrnaeum with O. onites.

ORIGANUM VULGARE L.

"WILD OREGANO"

TRANS-ANETHOLE PL PAS
 APIGENIN PL NAP
 APIGENIN-7-O-BETA-D-GLUCOSIDE PL
 ABS
 ALLO-AROMADENDRENE 18-120 PL
 BML
 AROMADENDRIN PL PAS
 ASCORBIC-ACID
 ASH 69,000-79,720 PL USA
 BICYCLOGERMACRENE 51-340 PL BML
 BETA-BISABOLENE 3-640 PL BML
 CIS-GAMMA-BISABOLENE 3-20 PL
 BML
 BORNEOL 32-252 PL BML
 BORON 21-41 PL BOB
 BETA-BOURBORNENE 54-430 PL BML
 DELTA-CADINENE 2-480 PL BML
 GAMMA-CADINENE 50-200 PL BML
 10-ALPHA-CADINOL 20-80 PL BML
 CAFFEIC-ACID 1,060 LF HHB

- CAFFEIC-ACID 6,000 PL HHB
 2-CAFFEYL-OXY-3-{2-(4-HYDROXYBENZYL)-4,5-DIHYDROXY}PHENYLPROPIONIC-ACID 21 LF NAP
 CALAMENENE 24-96 PL BML
 CALCIUM 14,070-18,794 PL BML
 CAMPHENE 1-64 PL BML
 CAMPHOR 0-40 PL BML
 CAPRIC-ACID 400-431 PL USA
 CARBOHYDRATES 644,300-693,911 PL USA
 DELTA-3-CARENE 2-96 PL BML
 BETA-CAROTENE 41-45 PL USA
 CARVACROL 6-640 PL BML
 CARVACRYL-METHYL-ETHER 16-64 PL BML
 CARVONE TR PL BML
 CARYOPHYLLENE 1-920 PL BML
 CARYOPHYLLENE-OXIDE 84-336 PL BML
 CATECHOL PL NAP
 CHLOROGENIC-ACID PL NAP
 1,8-CINEOLE 4-96 PL BML
 CINNAMIC-ACID PL NAP
 ALPHA-COPAENE 18-90 PL BML
 COPPER 9 PL USA
 COSMOSIIN PL NAP
 P-COUMARIC-ACID PL PAS
 CUMINAL 2-10 PL BML
 P-CYMELE 3-3,237 PL BML JAD NAP
 4-(3,4-DIHYDROXY-BENZOYL-OXY-METHYL)-PHENYL-BETA-D-GLUCOPYRANOSIDE LF NAP
 4-(3,4-DIHYDROXY-BENZOYL-OXY-METHYL)-PHENYL-BETA-D-GLUCOSIDE 2,330 LF NAP
 DIOSMETIN PL AYL
 DIPENTENE PL HHB
 BETA-ELEMENE 6-30 PL BML
 GAMMA-ELEMENE PL BML
 EO 1,500-10,000 PL HHB TO 49,000 PL ABS
 ERIODICTYOL PL PAS
 EUGENOL SH NAP
 BETA-FARNESENE PL BML
 TRANS,TRANS-ALPHA-FARNESENE 48-240 PL BML
 FAT 88,940-125,000 PL USA
 FIBER 109,900-203,870 PL USA
 GERANIOL PL BML
 GERANYL-ACETATE 1-96 PL BML
 GERMACRENE-D 190-1,192 PL BML
 TRANS-2-HEXANAL 132-660 PL BML
 ALPHA-HUMULENE 6-376 PL BML
 P-HYDROXYBENZOIC-ACID PL NAP
 5-HYDROXY-3,3',4',7-TETRAMETHOXY-FLAVONE PL NAP
 INDOLE-3-ACETIC-ACID PL PAS
 IRON 325-598 PL BML
 ISOVITEXIN PL PAS
 KAEMPFEROL PL BML
 LAURIC-ACID 200-215 PL USA
 LEDENE PL BML
 LEPTOSIDIN PL NAP
 LIMONENE 22-480 PL BML
 LINALOOL 1-600 PL BML
 LINALYL-ACETATE 8-184 PL BML
 LINOLEIC-ACID 1,050-1,131 PL USA
 ALPHA-LINOLENIC-ACID 4,180-4,502 PL USA
 LUTEOLIN PL NAP
 LUTEOLIN-7-O-BETA-D-GLUCURONIDE PL NAP
 MAGNESIUM 2,600-3,016 PL USA
 MANGANESE 47 PL USA
 ALPHA-MUUROLENE 3-15 PL BML
 GAMMA-MUUROLENE 16-88 PL BML
 MYRCENE 8-180 PL BML
 MYRISTIC-ACID 1,700-1,831 PL USA
 NARINGENIN
 NARINGIN PL NAP
 NERYL-ACETATE PL BML
 NIACIN 62-67 PL USA
 OCIMENE 24-96 PL BML
 CIS-OCIMENE 270-1,392 PL BML
 TRANS-OCIMENE 76-824 PL BML
 3-OCTANOL 2-150 PL BML
 1-OCTEN-3-OL 106-530 PL BML
 OLEANOLIC-ACID PL PAS
 OLEIC-ACID 5,100-5,493 PL USA
 ORIENTIN PL PAS
 PALMITIC-ACID 17,000-18,309 PL USA
 PALMITOLEIC-ACID 1,600-1,723 PL USA
 PENTYL-ALCOHOL
 PEONIDIN PL NAP
 ALPHA-PHELLANDRENE 2-244 PL BML JAD NAP
 BETA-PHELLANDRENE 12-60 PL BML
 PHOSPHORUS 1,769-2,402 PL USA
 PHYTOSTEROLS 2,030-2,186 PL USA
 ALPHA-PINENE 6-143 PL BML JAD NAP
 BETA-PINENE 1-312 PL BML
 CIS-PIPERITOL 10-40 PL BML
 POTASSIUM 16,066-18,647 PL USA
 PROTEIN 96,870-132,611 PL USA
 PROTOCATECHUIC-ACID 132 LF NAP
 QUERCETIN PL PAS

RETUSIN
 ROSMARINIC-ACID 790 LF NAP
 ROSMARINIC-ACID 4,000-16,600 PL ABS
 HHB NAP
 ROSMARINIC-ACID 55,000 PL FT62:166
 RUTIN PL PAS
 SABINENE 50-2,096 PL BML
 CIS-SABINENE-HYDRATE 1-46 PL BML
 SELINENE PL HHB
 SODIUM 109-205 PL USA
 SPATHULENOL 10-50 PL BML
 STACHYOSE PL HHB
 STEARIC-ACID 5,800-6,247 PL USA
 SYRINGIC-ACID PL NAP
 TANNINS 80,000 PL HHB
 TERPINEN-4-OL 17-390 PL BML
 ALPHA-TERPINENE 9-178 PL BML
 GAMMA-TERPINENE 1-1,476 PL BML
 JAD NAP
 TERPINOLENE 2-16 PL BML
 TERPINYL-ACETATE 54-216 PL BML
 THIAMIN 3-4 PL USA
 ALPHA-THUJENE 6-32 PL BML
 ALPHA-THUJONE PL BML
 THYMOL 2-5,000 PL BML HHB
 THYMYL-METHYL-ETHER 12-60 PL
 BML
 2-UNDECANONE 6-30 PL BML
 URSOLIC-ACID 3,100 PL HHB
 VANILLIC-ACID PL NAP
 VITEXIN PL PAS
 WATER 68,380-74,820 PL USA
 ZINC 39-49 PL USA

ORNITHOGALUM UMBELLATUM
 L.

“STAR OF BETHLEHEM”

CONVALLOSIDE BU HHB
 CONVALLOTOXIN 400 BU CRC
 MUCILAGE BU HHB
 RHODEXIN-A BU HHB
 RHODEXOSIDE BU HHB

ORYZA SATIVA L.

“RICE”

ACETALDEHYDE PL HHB
 ACETONE PL HHB
 TRANS-ACONITIC-ACID SH NAP
 ADENINE SD WOI
 D-ALANYL-D-ALANINE LF NAP
 D-ALANYL-GLYCINE LF NAP
 ALLANTOIN SD WOI

P-AMINOBENZOIC-ACID PL HHB
 AMYLOSE 0-131,075 SD WOI
 ANTHERAXANTHIN PL HHB
 D-ARABINO-1,4-LACTONE PL NAP
 ARABINOSE SD WOI
 ARACHIDIC-ACID SD HHB
 ARSENIC 0.211 SD HAM33(4):42
 ARUNDOIN SH NAP
 ASCORBIC-ACID 0 SD CRC
 ASH 75,000-185,800 PL CRC WOI
 ASH 7,000-57,000 SD CRC
 ASPARAGINE 2.8-10.5 $\mu\text{G}/\mu\text{L}$ JU NAP
 ASPARTIC-ACID HA NAP
 BEHENIC-ACID SD HHB
 BUTANAL PL HHB
 CADMIUM 0.18 SD HAM33(4):42
 CALCIUM 1,900-3,300 PL CRC WOI
 CALCIUM 71-364 SD CRC
 CAMPESTEROL PL HHB
 CARBOHYDRATES 420,000-478,000 PL
 CRC WOI
 CARBOHYDRATES 734,000-892,000 SD
 CRC
 CARLINOSIDE LF NAP
 BETA-CAROTENE 0 SD CRC
 CASTASTERONE 13.6 PPT SH NAP
 CELLOPENTAOSYLSITOSTEROL PL
 JSG
 CELLOTETRAOSYLSITOSTEROL PL
 JSG
 CELLULOSE 190,000-210,000 FR HU
 WOI
 CELLULOSE 340,000-534,600 PL ABS 1/
 WOI
 CERAMIDE 15 SH NAP
 CERYL-CEROTATE FR WOI
 CHOLINE 880 SD WOI
 CHRYSANTHEMIN PL HHB
 COPROSTAN PL HHB
 CORONARIC-ACID 0.1 SH NAP
 P-COUMARIC-ACID 0.9 PE NAP
 CYANIDIN-DIGLYCOSIDE LF NAP
 CYANIDIN-5-GLYCOSIDE LF NAP
 CYANIDIN-MONOGLYCOSIDE LF
 NAP
 CYANIN PL HHB
 CYCLOARTANOL PL HHB
 CYCLOARTENOL PL HHB
 CYCLOBRANOL PL HHB
 CYCLOEUCALENOL SD NAP
 CYLINDRIN SH NAP
 CYSTEINE PL PAS
 BETA-CYCLOORYSTENOL SD HHB
 (+)-DEHYDROVOMIFOLIOL 1 PE NAP

- 3-DEOXY-D-ARABINO-HEXONO-1,4-LACTONE PL NAP
 2-DEOXY-D-LYXONO-1,4-LACTONE PL NAP
 DESOXYCORTICOSTEROL PL HHB
 DEXTRIN 15,600-20,500 SD WOI
 DIGLYCOSYL-CERAMIDE 2 SH NAP
 15,16-DIHYDROCORONARIC-ACID 0.8 SH NAP
 DIHYDRO-BETA-SITOSTEROL SD HU HHB
 2,4-DINITROPHENYLHYDRAZONE SD HHB
 9,10-DIOXYSTEARIC-ACID PL HHB
 DIMETHYLAMINE SD WOI
 DNA-POLYMERASE TC NAP
 DOLICHOSTERONE 8.4 PPT SH NAP
 12(S),13(S)-EPOXY-11(R)-HYDROXY-OCTADECA-CIS-9,CIS15-DIEN-1-OIC-ACID 0.9 SH NAP
 12(S),13(S)-EPOXY-11(S)-HYDROXY-OCTADECA-CIS-9,CIS15-DIEN-1-OIC-ACID 0.4 SH NAP
 ERGOSTEROL SP HHB
 D-ERYTHRONO-1,4-LACTONE PL NAP
 ESTERASE PL NAP
 25-ETHOXY-24-METHOXYCYCLOARTANOL PL HHB
 FAT 9,000-15,000 PL ABS 1/ WOI
 FAT 15,000-27,000 SD WOI
 FERULIC-ACID PL HHB
 FIBER 334,000-350,000 PL ABS 1/ WOI
 FIBER 8,000-121,000 SDS CRC
 FURFURAL 90,000-100,000 FR HU WOI
 ALPHA-GLUCAN TC NAP
 5'O-(BETA-D-GLUCOPYRANOSYL)-PYROXIDINE FR NAP
 GLUCOSE 14,500-26,500 SD WOI
 GLUCOTRICIN PL HHB
 GLUTAMIC-ACID HA NAP
 GLYCINE PL PAS
 GUANIDINE SD WOI
 GUANINE SD WOI
 HEXANAL PL HHB
 HEXANOL PL HHB
 P-HYDROXYBENZOIC-ACID PL HHB
 25-HYDROXY-24-METHOXYCYCLOARTANOL PL HHB
 2-C-HYDROXY-METHYL-D-ERYTHRONO-1,4-LACTONE PL NAP
 HYPOXANTHINE PL WOI
 INDOLE-3-ACETIC-ACID-MYOINOSITOL 4.5 SD NAP
 INEKETONE 0.0033 PE NAP
 IRON 14-85 SD CRC
 ISOARBORINOL SH NAP
 ISOCERYL-ISOCEROTATE FR WOI
 ISOEUGENOL PL HHB
 ISOLEUCINE HA NAP
 ISOSCOPARIN-2"-GLUCOSIDE
 ISOSCOPARIN-2"-GLUCOSIDE-6'''-P-COUMARIC-ESTER PL NAP
 ISOSCOPARIN-2"-GLUCOSIDE-6'''-FERULIC-ESTER PL NAP
 KERACYANIN PL HHB
 KILOCALORIES 3,410-4,100 SD CRC
 LEAD 0.9 SD HAM33(4):42
 LECITHIN PL HHB
 LEUCINE HA NAP
 LIGNIN 45,000-255,300 PL ABS 1/ WOI
 LIGNOCERIC-ACID SD HHB
 LINOLEIC-ACID 6,600-11,880 SD HHB
 LINOLENIC-ACID SD HHB
 LUTEIN PL HHB
 LYSINE HA NAP
 LYSOLECITHIN SD WOI (TOXIC)
 D-LYXONO-1,4-LACTONE PL NAP
 MAGNESIUM 1,100-2,200 PL ABS 1/ WOI
 MERCURY 0.167 SD HAM33(4):42
 METHIONINE PL PAS
 24-METHYLENE-CYCLOARTANOL PL HHB
 2-C-METHYL-D-ERYTHRONO-1,4-LACTONE
 24-METHYL-24-METHOXYCYCLOARTANOL PL HHB
 MOMILACTONE-A 4 PE NAP
 MOMILACTONE-B 1 PE NAP
 MOMILACTONE-C 0.01 PE NAP
 MONOGLYCOSYL-CERAMIDE 250 SH NAP
 MYRICYL-CEROTATE FR WOI
 NEOSCHAFTOSIDE LF NAP
 NEOXANTHIN PL HHB
 NAPHTHALINE SP HHB
 NEOCARLINSIDE PL NAP
 NIACIN 40-65 SD CRC
 NICKEL 1.632 SD HAM33(4):42
 NICOTIANAMINE SP NAP
 OLEIC-ACID 4,500-8,100 SD HHB
 ORYZABRANS SD NAP
 ORYZALEXIN-A 1-1.4 LF NAP
 ORYZALEXIN-B 0.6 LF NAP
 ORYZALEXIN-C 5.4 LF NAP
 ORYZALEXIN-D LF NAP
 ORYZANOL-A SD HHB
 ORYZANOL-B SD HHB

ORYZANOLE PL HHB
 ORYZARANS RT NAP
 ORYZAROL ST HHB
 ORYZENIN SD WOI
 OXALIC-ACID 46 SD WBB
 PALMITIC-ACID 1,800-3,240 SD HHB
 PANGAMIC-ACID SD HU HHB
 PANTOTHENIC-ACID 6-17 SD WOI
 PELARGONIC-ACID
 PENTANAL PL HHB
 PENTOSANS 209,000 PL WOI
 PHOSPHORUS 600-3,478 PL CRC WOI
 PHOSPHORUS 528-5,588 SD WOI
 PHYTTIN SD NAP
 PHYTTIN-PHOSPHORUS 211-2,235 SD
 WOI
 PHYTOCEREBROSIDE PL HHB
 POTASSIUM 12,000-12,600 PL ABS 1/
 WOI
 POTASSIUM 1,000-2,431 SD CRC WOI
 PRIMULIN SD HHB
 PROPANAL PL HHB
 PROTEIN 470,000 ??? HA NAP
 PROTEIN 34,000-45,000 PL ABS 1/ WOI
 PROTEIN 58,000-85,000 SD CRC
 PYRIDOXINE 4-10 SD WOI
 QUINIC-ACID LF NAP
 RHAMNOGALACTURONAN-I TC NAP
 1-RHAMNONO-1,4-LACTONE PL NAP
 RIBOFLAVIN 0.5-0.7 SD CRC
 RIBOTIDE-CIS-ZEATIN RT NAP
 RIBOTIDE-TRANS-ZEATIN RT NAP
 SATIVIC-ACID SP HHB
 SCHAFTOSIDE LF NAP
 SERINE PL PAS
 SHIKIMIC-ACID LF NAP
 SILICA 140,000 PL ABS 1/
 SILICIC-ACID LF HHB
 BETA-SITOSTEROL 0.3-3 NG/ μ L JU NAP
 BETA-SITOSTEROL SP HHB
 GAMMA-SITOSTEROL SP HHB
 SODIUM 3,500 PL WOI
 SODIUM 90-939 SD CRC
 SQUALENE SD WOI
 STARCH 722,000-749,000 SD WOI
 STEARIC-ACID 150-270 SD HHB
 STIGMASTEROL 0.3-1 NG/ μ L JU NAP
 SUCROSE 3,000-4,800 SD WOI
 SULFUR 1,000 PL ABS 1/
 TARAXANTHIN PL HHB
 THIAMIN 2.2-3.9 SD CRC
 THREONINE HA NAP
 ALPHA-TOCOPHEROL SD HHB
 GAMMA-TOCOPHEROL SD HHB

TOCOPHERONE WX WOI
 TRIACONTANOL-(1) SP HHB
 TRICIN PL HHB
 TRICIN 0.066 PE NAP
 TRICIN-5-O-BETA-D-GLUCOSIDE PL
 NAP
 TRICIN-5-GLUCOSIDE PL HHB
 TRIGLYCOSYL-CERAMIDE 1 SH NAP
 TRIGONELLINE SP HHB
 TRIMETHYLAMINE SD WOI
 TYROSINE PL PAS
 UNDECYLIC-ACID PL HHB
 URACIL SD WOI
 VALINE HA NAP
 VANILLIC-ACID PL HHB
 VERNOLIC-ACID 0.1 SH NAP
 VIOLANTHIN PL NAP
 VIOLAXANTHIN PL HHB
 WATER 103,000 SD CRC
 XANTHINE PL WOI
 XANTHOPHYLL PL HHB
 XYLOSE SD WOI

1/Abs=Econ. Bot. 28: 339.1974.

OXALIS TUBEROSA MOLINA

“OCA”

“PAPA ROJA”

“QUIBA”

ASCORBIC-ACID 370-2,284 RT CRC
 ASH 8,000-49,000 RT CRC
 CALCIUM 40-247 RT CRC
 CARBOHYDRATES 138,000-852,000 RT
 CRC
 BETA-CAROTENE 0-0.2 RT CRC PAN
 FAT 6,000-37,000 RT CRC
 FIBER 5,000-49,000 RT CRC PAN
 IRON 8-49 RT CRC
 KILOCALORIES 630-3,890 RT CRC
 NIACIN 4-25 RT CRC PAN
 PHOSPHORUS 340-2,099 RT CRC
 PROTEIN 7,000-62,000 RT CRC PAN
 RIBOFLAVIN 0.3-4.3 RT CRC PAN
 THIAMIN 0.5-3.1 RT CRC
 WATER 824,000-838,000 RT CRC PAN

PACHIRA AQUATICA AUBL.

“PROVISION TREE”

CYCLOPROPENOLIDS 153,700 SD ABS
 CRC
 FAT 580,000 SD JFM

LINOLEIC-ACID 29,000-63,800 SD CRC
JFM
OLEIC-ACID 43,500-249,400 SD CRC JFM
PALMITIC-ACID 266,800-324,800 SD
CRC JFM
BETA-SITOSTEROL SD 499/
STEARIC-ACID 0-17,400 SD CRC JFM
STERCULIC-ACID SD 499/
TANNIN 27,000 BK JFM

***PACHIRA MACROCARPA* WALP.**

“LARGE-FRUITED
PROVISION TREE”

ASCORBIC-ACID 240-255 SD CRC
ASH 35,000-37,000 SD CRC
CALCIUM 830-875 SD CRC
CARBOHYDRATES 359,000-37,900 SD
CRC
BETA-CAROTENE 12-13 SD CRC
FAT 392,000-414,000 SD CRC
FIBER 124,000-131,000 SD CRC
IRON 38-40 SD CRC
KILOCALORIES 5,300-5,600 SD CRC
NIACIN 38-40 SD CRC
PHOSPHORUS 2,860-3,025 SD CRC
POTASSIUM 6,630-7,000 SD CRC
PROTEIN 160,000-169,000 SD CRC
RIBOFLAVIN 0.6 SD CRC
SODIUM 720-760 SD CRC
THIAMIN 0.3 SD CRC
WATER 54,000 SD CRC

***PACHYRHIZUS EROSUS* RICH.
EX DC.**

“YAMBEAN”

ADENINE TU WOI
ALANINE 380-3,500 TU USA
ARACHIDIC-ACID SD HHB
ARGININE 720-6,635 TU USA
ASCORBIC-ACID 140-1,845
ASH 5,000-46,080 TU USA
ASPARTIC-ACID 3,870-35,670 TU USA
CALCIUM 150-1,380 TU USA
CARBOHYDRATES 87,500-806,450 TU
USA
BETA-CAROTENE 0 TU USA
CHOLINE TU WOI
COPPER 4-25 TU WOI
CYSTINE 110-1,015 TU USA
DEHYDRONEOTENONE SD HHB
DOLICHONE SD HHB

EICOSENOIC-ACID SD HHB
EROSENONE PL JSG
EROSNIN SD HHB
EROSONE SD WOI
FAT 200,000 SD HHB
FAT 2,000-18,435 TU USA
FIBER 6,400-64,515 TU USA WOI
GLUTAMIC-ACID 820-7,560 TU USA
GLYCINE 310-2,855 TU USA
HEXADECANOIC-ACID SD HHB
HISTIDINE 370-3,410 TU USA
12-ALPHA-HYDROXYDOLINEONE SD
HHB
12-ALPHA-HYDROXYEROSENONE PL
JSG
12-ALPHA-HYDROXYMUNDUSERONE
PL JSG
12-ALPHA-HYDROXYPACHYRRHIZONE
SD HHB
12-ALPHA-HYDROXYROTENONE PL
JSG
IRON 6-55 TU USA
ISOELLIPTONE SD HHB
ISOLEUCINE 310-2,855 TU USA
KILOCALORIES 410-3,780 TU USA
LEUCINE 480-4,425 TU USA
LINOLEIC-ACID SD HHB
LINOLENIC-ACID SD HHB
LYSINE 510-4,700 TU USA
MAGNESIUM 160-1,475 TU USA
METHIONINE 130-1,200 TU USA
DL-NEOTENONE SD HHB
NIACIN 3-28 TU USA
OLEIC-ACID SD HHB
PACHYRHIZINE SD WOI
PACHYRHIZONE SD WOI
PACHYSAPOGENIN-A SD WOI
PACHYSAPOGENIN-B SD WOI
PALMITIC-ACID SD HHB
PHENYLALANINE 320-2,950 TU USA
PHOSPHORUS 180-1,660 TU USA
PHYTIN TU WOI
POTASSIUM 1,750-16,130 TU USA
PROLINE 470-4,330 TU USA
PROTEIN 14,000-129,030 TU USA
RIBOFLAVIN 0.3-2.8 TU USA
ROTENONE 1,000-10,000 SD WOI
SERINE 470-4,330 TU USA
SODIUM 60-555 TU USA
STARCH 97,200-551,645 TU WOI
STEARIC-ACID SD HHB
SUGARS 52,200-296,255 TU WOI
THIAMIN 0.4-3.7 TU USA
THREONINE 350-3,225 TU USA

TYROSINE 230-2,120 TU USA
 VALINE 420-3,870 TU USA
 WATER 891,500 TU USA

USA did not specify *P. erosus*

PAEONIA LACTIFLORA PALL.

“PEONY; CHIH-SHAO”

ALBIFLORIN RT CCO
 ARSENIC 0.12 RT CAL
 ASTRAGALIN PL CCO
 BENZOIC-ACID 11,000 RT CCO
 BENZOYLPAEONIFLORIN RT CCO
 CALCIUM 10,300-40,600 RT CAL SMO
 COPPER 3-6 RT CAL SMO
 DECAGALLOYL-GLUCOSE RT EMP1:53
 EO RT CCO
 GALLIC-ACID RT HHB
 GALLOYL-TANNINS 20,000-40,000 RT
 HHB
 GLUCOGALLIN FL HHB
 GLUCOSE RT HHB
 HEDERAGENIN RT EMP1:53
 HEPTAGALLOYL-GLUCOSE RT HHB
 HEXAGALLOYL-GLUCOSE FL HHB
 IRON 40-47 RT CAL SMO
 KAEMPFEROL LF HHB
 KAEMPFEROL-3,7-DIGLUCOSIDE FL
 HHB
 LACTIFLORIC-ACID PL JSG
 LACTIFLORIN PL JSG
 LINOLEIC-ACID RT EMP1:53
 MAGNESIUM 580-990 RT CAL SMO
 MANGANESE 14-20 RT CAL SMO
 MESOINOSITOL FL BD HHB
 13-METHYLMYRISTIC-ACID FL HHB
 NONAGALLOYL-GLUCOSE RT EMP1:53
 OCTAGALLOYL-GLUCOSE RT EMP1:53
 OXYPAEONIFLORIN RT CCO
 PAEONIDIN FL CCO
 PAEONIFLORIGENONE 400 RT CCO
 PAEONIFLORIN 31,000 RT CCO
 PAEONIFLORIQUNONE PL JSG
 PAEONIN RT CCO
 PAEONOL RT CCO
 PALMITIC-ACID RT EMP1:53
 PENTACOSAN FL HHB
 PENTAGALLOYL-GLUCOSE RT 411/
 1,2,3,4,6-PENTA-O-GALLOYL-GLUCOSE
 RT EMP1:53
 (Z)-1S,5R-ALPHA-PINEN-10-YL-ALPHA-
 VICIANOSIDE PL JSG
 POTASSIUM 5,000-7,860 RT CAL SMO

QUERCETIN LF HHB
 QUERCIMERITRIN LF HHB
 BETA-SITOSTEROL FL HHB
 SODIUM 196-286 RT CAL SMO
 SUCROSE FL BD HHB
 TANNIN RT CCO
 ZINC 15-24 RT CAL SMO

Often treated as synonymous with *P.*
albiflora; chemicals are also cited here.

PAEONIA SUFFRUTICOSA

ANDR.

“MOUTAN”

“TREE PEONY”

APIGENIN-7-GLUCOSIDE FL HHB
 APIGENIN-7-RHAMNOGLUCOSIDE FL
 HHB
 L-ARABINOSE RT BK CCO
 ARSENIC 0.09 RT BK CAL
 BENZOIC-ACID RT BK CCO
 BENZOYLOXYPAEONIFLORIN RT BK
 CCO
 BENZOYLPAEONIFLORIN RT BK CCO
 CALCIUM 5,150-16,700 RT BK CAL SMO
 CAMPESTEROL RT BK CCO
 COPPER 5-6 RT BK CAL SMO
 D-GLUCOSE RT BK CCO
 IRON 95-120 RT BK CAL SMO
 KAEMPFEROL LF HHB
 KAEMPFEROL-3,7-DIGLUCOSIDE FL
 HHB
 KAEMPFEROL-3-BETA-GLUCOSIDE FL
 HHB
 MAGNESIUM 930-1,180 RT BK CAL
 SMO
 MANGANESE 10-34 RT BK CAL SMO
 OXYPAEONIFLORIN RT BK CCO
 PAEONIFLORIN RT BK CCO
 PAENOL RT BK CCO
 PAEONOLIDE RT BK CCO
 PAEONOSIDE RT BK CCO
 POTASSIUM 4,580-6,700 RT BK CAL
 SMO
 QUERCETIN LF HHB
 BETA-SITOSTEROL RT BK CCO
 SODIUM 178-180 RT BK CAL SMO
 STARCH RT BK HHB
 TANNIN RT BK HHB
 ZINC 10-15 RT BK CAL SMO

HORT III relegates *P. moutan* to *P.*
suffruticosa Andr.

PAEONIA OFFICINALIS* L.*"DOUBLE PEONY"**

ARABINIC-ACID SD HHB
 ARGININE RT CRC
 BENZOIC-ACID RT HHB
 CALCIUM-OXALATE RT HHB
 CYANIN FL HHB
 EO 4,000 RT HHB
 FAT 236,100 SD HHB
 GLUCOPAEONOL RT HHB
 GLUCOSE 40,000-50,000 RT HHB
 GLUTAMINE RT CRC
 METARABINIC-ACID 20,000 RT HHBB
 PAEONIBROWN 40,000 SD HHB
 PAEONIFLUORESZIN RT HHB
 PAEONIN FL HHB
 PAEONOL RT HHB
 PECTIN SD HHB
 PEONIIDE RT CRC
 PEREGRININE SD HHB
 PROTEIN 110,000 SD HHB
 RESINIC-ACID 11,300 SD HHB
 STARCH 140,000-200,000 RT HHB
 SUCROSE 80,000-140,000 RT HHB
 SUGAR 14,000 SD HHB
 TANNIN RT HHB

PAEONIA SUFFRUTICOSA**ANDR.****"MOUTAN"****"TREE PEONY"**

APIGENIN-7-GLUCOSIDE FL HHB
 APIGENIN-7-RHAMNOGLUCOSIDE FL HHB
 L-ARABINOSE RT BK CCO
 ARSENIC 0.09 RT BK CAL
 BENZOIC-ACID RT BK CCO
 BENZOYLOXYPAEONIFLORIN RT BK CCO
 BENZOYLPAEONIFLORIN RT BK CCO
 CALCIUM 5,150-16,700 RT BK CAL SMO
 CAMPESTEROL RT BK CCO
 COPPER 5-6 RT BK CAL SMO
 D-GLUCOSE RT BK CCO
 IRON 95-120 RT BK CAL SMO
 KAEMPFEROL LF HHB
 KAEMPFEROL-3,7-DIGLUCOSIDE FL HHB
 KAEMPFEROL-3-BETA-GLUCOSIDE FL HHB

MAGNESIUM 930-1,180 RT BK CAL SMO
 MANGANESE 10-34 RT BK CAL SMO
 OXYPAEONIFLORIN RT BK CCO
 PAEONIFLORIN RT BK CCO
 PAENOL RT BK CCO
 PAEONOLIDE RT BK CCO
 PAEONOSIDE RT BK CCO
 POTASSIUM 4,580-6,700 RT BK CAL SMO
 QUERCETIN LF HHB
 BETA-SITOSTEROL RT BK CCO
 SODIUM 178-180 RT BK CAL SMO
 STARCH RT BK HHB
 TANNIN RT BK HHB
 ZINC 10-15 RT BK CAL SMO

HORT III relegates *P. moutan* to *P. suffruticosa* Andr.

PANAX GINSENG* C. MEYER*"CHINESE GINSENG;
ORIENTAL GINSENG"**

ALUMINUM 22 RT PED 1/
 ASCORBIC-ACID 0 RT PED
 ASH 50.000 RT PED
 BIOTIN 0.9 RT HHB
 CALCIUM 2,880-4,140 RT PED SMO
 CAMPESTEROL-6'-
 LINOLENYLGLUCOSIDE RT CCO
 CAMPESTEROL-6'-LINOLYLGLUCOSIDE RT CCO
 CAMPESTEROL-6'-OLEYLGLUCOSIDE RT CCO
 CAMPESTEROL-6'-
 PALMITYLGLUCOSIDE RT CCO
 CAMPESTEROL-6'-STEARYLGLUCOSIDE RT CCO
 CARBOHYDRATES 834.000 RT PED
 CARBON-DISULFIDE 1,500 RT HHB
 BETA-CAROTENE TR RT PED
 CHOLINE 1,000-2,000 RT CCO
 CHROMIUM 11 RT PED
 CITRIC-ACID RT HHB
 COBALT 31 RT PED
 COPPER 17 RT SMO
 DISACCHARIDES 33,000 RT HHB
 BETA-ELEMENE RT CCO
 EO 500 RT CCO
 FAT 17,700 RT PED
 FIBER 72,000 RT PED
 D-FRUCTOSE RT CCO
 FUMARIC-ACID RT HHB

GINSENOSE-F1 4,000 LF CCO
 GINSENOSE
 GINSENOSE-F2 2,000 LF CCO
 GINSENOSE-F3 2,000 LF CCO
 GINSENOSE-M-7-CD FL CCO
 GINSENOSE-RA-2 RT CCO
 GINSENOSE-RB-1 2,000 FL BD CCO
 GINSENOSE-RB-1 1,000 LF CCO
 GINSENOSE-RB-1 5,000 RT CCO
 GINSENOSE-RB-2 2,000 FL CCO
 GINSENOSE-RB-2 2,00 FR CCO
 GINSENOSE-RB-2 4,000 LF CCO
 GINSENOSE-RB-2 2,000 RT CCO
 GINSENOSE-RB-3 50 RT CCO
 GINSENOSE-RC 2,000 FL CCO
 GINSENOSE-RC 1,000 FR CCO
 GINSENOSE-RC 2,000 LF CCO
 GINSENOSE-RC 3,000 RT CCO
 GINSENOSE-RD 5,000 FL CCO
 GINSENOSE-RD 1,000 FR CCO
 GINSENOSE-RD 15,000 LF CCO
 GINSENOSE-RD 2,000 RT CCO
 GINSENOSE-RE 28,000 FL CCO
 GINSENOSE-RE 25,000-60,000 FR CCO
 GINSENOSE-RE 15,000 LF CCO
 GINSENOSE-RE 2,000 RT CCO
 GINSENOSE-RF TR RT CCO
 GINSENOSE-RG-1 2,000 FL CCO
 GINSENOSE-RG-1 400 FR CCO
 GINSENOSE-RG-1 15,000 LF CCO
 GINSENOSE-RG-1 2,000 RT CCO
 GINSENOSE-RG-2 TR RT CCO
 GINSENOSE-RH1 RT CCO
 GINSENOSE-RO RT CCO
 2-GLUCOGINSENOSE-RF 50 RT CCO
 O-ALPHA-D-GLUCOPYRANOSYL...
 FRUCTOFURANOSIDE RT HHB
 O-ALPHA-D-GLUCOPYRANOSYL...
 GLUCOPYRANOSE RT HHB
 D-GLUCOSE RT CCO
 HEPTADECA-1-EN-4,6-DIYN-3,9-DIOL
 150 RT CCO
 IRON TR-180 RT PED SMO
 KAEMPFEROL LF CCO
 KILOCALORIES 2,740 RT PED
 LUTEOLIN-7-GLUCOSIDE LF CCO
 MAGNESIUM 481-1,950 RT PED SMO
 MALEIC-ACID RT HHB
 MALIC-ACID RT HHB
 MALTOSE RT CCO
 ALPHA-MALTOSYL-BETA-D-
 FRUCTOFURANOSIDE RT HHB
 MANGANESE 19-180 RT PED SMO
 MONOSACCHARIDES 15,000 RT CCO
 NEOCLOVENE PL JSG
 NIACIN 80 RT PED
 N-NONACOSANE LF CCO
 OCTACOSAN-1-OL LF CCO
 OLEANOLIC-ACID RT HHB
 PANACENE RT CCO
 PANASENOSE LF CCO
 PANAXIC-ACID RT HHB
 PANAXIN RT CCO
 PANAXYDOL RT CCO
 PANAXYNOL RT CCO
 (ANTIGRANULATORY)
 PANTOTHENIC-ACID 6.6 RT HHB
 PECTIN RT HHB
 PHOSPHORUS 528 RT PED
 POTASSIUM 2,430-10,700 RT PED
 SMO
 PROTEIN 109,000 RT PED
 RIBOFLAVIN 1.8 RT PED
 SELENIUM 25 RT PED 2/
 SILICON TR RT PED
 BETA-SITOSTEROL RT CCO
 BETA-SITOSTEROL-3-O-BETA-D-
 GLUCOSIDE RT CCO
 SITOSTEROL-6'-LINOLENYLGLUCOSIDE
 RT CCO
 SITOSTEROL-6'-LINOLYLGLUCOSIDE
 RT CCO
 SITOSTEROL-6'-OLEYLGLUCOSIDE RT
 CCO
 SITOSTEROL-6'-PALMITYLGLUCOSIDE
 RT CCO
 SITOSTEROL-6'-STEARYLGLUCOSIDE
 RT CCO
 BETA-SITOSTERYL-GLUCOSIDE
 SODIUM 24-209 RT PED SMO
 STIGMASTEROL-6'-
 LINOLENYLGLUCOSIDE RT CCO
 STIGMASTEROL-6'-
 LINOLYLGLUCOSIDE RT CCO
 STIGMASTEROL-6'-OLEYLGLUCOSIDE
 RT CCO
 STIGMASTEROL-6'-
 PALMITYLGLUCOSIDE RT CCO
 STIGMASTEROL-6'-
 STEARYLGLUCOSIDE RT CCO
 SUCROSE RT CCO
 TARTARIC-ACID RT HHB
 THIAMIN 1.7 RT PED
 TIN 16 RT PED
 TRIFOLIN LF CCO
 WATER 788,000 RT PED
 ZINC TR-27 RT PED SMO

1/Pedersen's Nutritional Herbology lists 2.2 g
but I think he meant 2.2 mg/100 g 2/
Pedersen's data are often much too high.

PANAX JAPONICUS C.A.MEYER

"JAPANESE GINSENG"

ARABINOSE RH CCO
CALCIUM 7,000 RH SMO
CAMPESTEROL RH CCO
CAMPESTEROL-
6'-LINOLENYLGLUCOSIDE RH CCO
CAMPESTEROL-6'-LINOYLGLUCOSIDE
RH CCO
CAMPESTEROL-6'-OLEYLGLUCOSIDE
RH CCO
CAMPESTEROL-6'-
PALMITYLGLUCOSIDE RH CCO
CAMPESTEROL-6'-STEARYLGLUCOSIDE
RH CCO
CHIKUSETSUSAPONIN-I-A RH CCO
CHIKUSETSUSAPONIN-I-B RH CCO
CHIKUSETSUSAPONIN-III RH CCO
CHIKUSETSUSAPONIN-IV RH CCO
CHIKUSETSUSAPONIN-IV-A 1,900 RH
CCO
CHIKUSETSUSAPONIN-V 9,500 LF CCO
CHIKUSETSUSAPONIN-L-5 LF CCO
CHIKUSETSUSAPONIN-L-9A LF CCO
CHIKUSETSUSAPONIN-L-10 LF CCO
CHIKUSETSUSAPONIN-LN-4 LF CCO
CHIKUSETSUSAPONIN-LT-5 LF CCO
CHIKUSETSUSAPONIN-LT-8 LF CCO
COPPER 6 RH SMO
GINSENOSIDE-F-1 LF CCO
GINSENOSIDE-RD 6,700 RH CCO
GINSENOSIDE-RG-2 RH CCO
GINSENOSIDE-RO RH CCO
GLUCOSE RH HHB
GLUCURONIC-ACID RH HHB
IRON 360 RH SMO
MAGNESIUM 2,400 RH SMO
MAJONOSIDE-R1 700 RH CCO
MAJONOSIDE-R2 1,100 RH CCO
MANGANESE 43 RH SMO
NOTOGINSENOSIDE-R2 300 RH CCO
OLEANOLIC-ACID RH CCO
PANATOXIN RH CCO
POTASSIUM 11,000 RH SMO
SAPONINS 70,000 RH CCO
SITOSTEROL-6'-LINOLENYLGLUCOSIDE
RH CCO
SITOSTEROL-6'-LINOLYLGLUCOSIDE
RH CCO

SITOSTEROL-6'-OLEYLGLUCOSIDE RH
CCO
SITOSTEROL-6'-STEARYLGLUCOSIDE
RH CCO
BETA-SITOSTEROL RH CCO
SODIUM 499 RH SMO
STIGMASTEROL-6'-
LINOLENYLGLUCOSIDE RH CCO
STIGMASTEROL-6'-
LINOLYLGLUCOSIDE RH CCO
STIGMASTEROL-6'-OLEYLGLUCOSIDE
RH CCO
STIGMASTEROL-6'-
PALMITYLGLUCOSIDE RH CCO
STIGMASTEROL-6'-
STEARYLGLUCOSIDE RH CCO
ZINC 20 RH SMO

PANAX NOTOGINSENG

(BURKILL) HOO & TSENG

"SANCHI GINSENG"

DAUCOSTEROL RT CRC
GINSENOSIDE-RA RT CCO
GINSENOSIDE-RB RT CCO
GINSENOSIDE-RB1 RT CCO
GINSENOSIDE-RB2 RT CCO
GINSENOSIDE-RE RT CCO
GINSENOSIDE-RG1 RT CCO
GINSENOSIDE-RG2 RT CCO
GINSENOSIDES 87,000 RT CRC
NOTOGINSENOSIDES RT CRC
PANAXYNAL RT CCO
(20)-PROTOPANAXADIOL RT CRC
(20)-PROTOPANAXATRIOL RT CRC
QUERCETIN RT CRC
BETA-SITOSTEROL RT CRC

PANAX QUINQUEFOLIUS L.

"AMERICAN GINSENG"

ACETIC-ACID 126
ADENINE
ADENOSINE
ALANINE 209-2,250
ALLOISOLEUCINE
ALUMINUM 24-285
ALPHA-AMINOBUTYRIC-ACID
BETA-AMINOBUTYRIC-ACID
BETA-AMINOISOBUTYRIC-ACID
AMYLASE
ARABINOFURANOSE
ARABINOSE

ARASAPONIN-A
 ARASAPONIN-B
 ARGININE 11,530-17,615
 ARSENIC 0.25-0.44
 ASCORBIC-ACID 39
 ASPARAGINE
 ASPARTIC-ACID 1,265-4,310
 BENZOIC-ACID
 BICYCLOGERMACRENE
 BIOTIN 1-9
 BORON 24-96
 N-BUTYRIC-ACID 1
 CALCIUM 2,340-10,800
 CALCIUM-POLYURONIDE
 CAMPESTEROL
 N-CAPROIC-ACID 6
 CARBOHYDRATES 700,000
 CARYOPHYLLENE
 CHOLINE 1,000-2,000
 CINNAMIC-ACID
 CITRIC-ACID 3,000
 COBALT 0.06-0.44
 COLONIN
 COPPER 6-13
 CYSTEIC-ACID
 CYSTEINE 200
 CYSTINE 108
 DAUCOSTERIN 300
 DIASTASE
 DEXTROSE
 1,3-DIMETHYL-ACRYLIC-ACID
 ECHINOCYSTIC-ACID
 BETA-ELEMENE
 9,10-EPOXY-3-HYDROXYHEPTADECA-1-
 EN-4,6-DIYNE
 ESCIN
 ESTRADIOL
 ESTROL
 ESTRONE
 ETHYL-MACHAERINATE
 BETA-FARNESENE
 FAT 10,000
 FERULIC-ACID
 FIBER 59,000-245,000
 FOLIC-ACID 0-68
 FORMIC-ACID
 D-FRUCTOSE 4,160-5,000
 FUMARIC-ACID
 GALACTOSE
 GALACTURONIC-ACID
 GERMACRENE-D
 GERMANIUM
 GINSENIN
 GINSENOSIDE-R-O
 GINSENOSIDE-RB
 GINSENOSIDE-RB-1
 GINSENOSIDE-RB-1
 GINSENOSIDE-RB-2
 GINSENOSIDE-RC
 GINSENOSIDE-RD
 GINSENOSIDE-RE
 GINSENOSIDE-RF
 GINSENOSIDE-RG
 GINSENOSIDE-RG-1
 GINSENOSIDE-RG-2
 D-GLUCOSE 5,340-15,000
 GLUCURONIC-ACID
 GLUCURONOLACTONE
 GLUTAMIC-ACID 396-4,450
 GLUTAMOSE
 GLUTARIC-ACID
 GLYCINE 23-1,540
 GUANIDINE
 GUANINE
 HEPTADECA-1-EN-4,6-DIYN-3,9-DIOL
 1,9-CIS-HEPTADECADIE NE-1,6-DIYN-3-
 OL
 1,9-CIS-HEPTADECADIE NE-4,6-DIYN-3-
 OL
 1-HEPTADECAENE-4,6-DIYN-3,8,10-
 TRIOL
 1-HEPTADECAENE-4,6-DIYN-3,8-DIOL
 HISTIDINE 320-1,100
 ALPHA-HUMULENE
 BETA-HUMULENE
 HYDROXYCHOLINE 1
 P-HYDROXYCINNAMIC-ACID 28
 3-HYDROXY-5-METHYL-GAMMA-
 PYRONE
 HYDROXYPROLINE
 IODINE
 IRON 49-407
 ISOBUTYRIC-ACID 15
 ISOLEUCINE 151-370
 ISOVALERIC-ACID 7
 KAEMPFEROL
 KAEMPFEROL-3-GLUCOGALACTOSIDE
 KETOGLUTARIC-ACID 5,500
 LEUCINE 420-1,530
 LEVULOSE
 LINOLEIC-ACID
 LINOLENIC-ACID
 LYSINE 2,080-2,100
 MAGNESIUM 980-2,200
 MALEIC-ACID
 MALIC-ACID
 MALONIC-ACID
 MALTOL

MALTOSE
 MANGANESE 19-156
 METHIONINE 34-340
 METHYL-BUTYRIC-ACID
 MOLYBDENUM 10-14
 O-MONOMETHYLAMINOBENZOIC-
 ACID
 ALPHA-NEOCLOVENE
 BETA-NEOCLOVENE
 NIACIN 47-60
 NICOTINIC-ACID 14-16
 NITROGEN 15,000-20,000
 NONACOSANE
 1-OCTACOSANOL
 OLEANOLIC-ACID
 OLEIC-ACID
 PALMITIC-ACID
 PANACEN
 PANAQUILON
 ALPHA-PANASINSENE
 BETA-PANASINSENE
 PANAX-ACID
 PANAXADIOL 6,500-8,960
 PANAXASAPOGENIN
 PANAXASAPOGENOL
 PANAXATRIOL 7,390-12,450
 PANAXIC-ACID
 PANAXIN
 PANAXOSIDE-A
 PANAXOSIDE-B
 PANAXOSIDE-C
 PANAXOSIDE-D
 PANAXOSIDE-E
 PANAXOSIDE-F
 PANAXYDIOL
 PANAXYNOL
 PANTOTHENIC-ACID 7-10
 PECTIN
 PETROSELINIC-ACID
 PETROSELADIC-ACID
 PHENOLASE
 PHENYLALANINE
 PHOSPHORUS 2,700-5,200
 POTASSIUM 6,600-33,800
 PROLINE 175-1,120
 PROPIONIC-ACID 4
 PROSTISOL
 PROTEIN 122,000
 PROTOPANAXADION
 PROTOPANAXATRIOL
 ALPHA-PYRROLIDONE
 PYRUVIC-ACID 7,000
 RAFFINOSE
 RESIN

L-RHAMNOSE
 RIBOFLAVIN 0-1
 SACCHAROSE
 SAIKOSAPONIN-A
 SAIKOSAPONIN-B
 SALICYLIC-ACID
 BETA-SANTALENE
 SAPONIN 7,500-10,000
 ALPHA-SELINENE
 BETA-SELINENE
 GAMMA-SELINENE
 SERINE 289-1,240
 SILICON
 BETA-SITOSTEROL
 BETA-SITOSTEROL-GLYCOSIDE
 SODIUM 500-4,800
 STARCH 80,000-320,000
 STEARIC-ACID
 STIGMASTEROL 500
 STRONTIUM
 SUCCINIC-ACID 40,000
 SUCROSE 15,000-85,000
 SULFUR 1,500
 TANNIN
 TARTARIC-ACID
 TENUIFOLIC-ACID
 THREONINE 584-1,070
 TIGLIC-ACID
 TYROSINE
 URACIL
 URIDINE
 URONIC-ACID
 N-VALERIC-ACID
 VALINE 82
 VANADIUM 0.02
 VANILLIC-ACID 33
 VIT-B12 0.4-0.6
 D-XYLOSE
 ZINC 10-114

Source: Duke's Ginseng: a Concise Hand-
 book, which uses data for both *Panax*
quinquefolius and *P. ginseng*. Experts claim
 they can tell them apart. I doubt it.

PANCRATIUM MARITIMUM L.

“SEA DAFFODIL”

DEMETHYLHOMOLYCORINE BU ALK
 GALANTHAMINE BU ALK
 HAEMANTHIDINE BU ALK
 HIPPEASTRINE BU ALK
 HOMOLYCORENINE BU ALK
 HOMOLYCORINE BU ALK

HORDENINE SH ALK
 LYCORENINE BU ALK
 LYCORINE BU ALK
 PANCRACINE PL JSG
 PANCRATINE BU ALK
 POETARICINE BU ALK
 SICKENBERGINE BU ALK
 TAZETTINE BU ALK
 VITTATINE PL ALK

PAPAYER BRACTEATUM L.

“GREAT SCARLET POPPY”

ACETYLORNITHINE PL CRC
 ALANINE 7,000-8,650 SD1/
 ALPIGENINE PL CRC
 ARGININE 18,300-21,650 SD1/
 ASPARTIC-ACID 17,000-20,350 SD1/
 ASPARTIC-ACID 17,000-20,350 SD1/
 BRACTAMINE PL CRC
 BRACTAVINE PL CRC
 BRACTEINE PL CRC
 BRACTEOLINE PL CRC
 CODEINE PL CRC
 COPTISINE PL JE3:21
 CORYPALLINE PC22:247
 CYSTINE 4,150-4,950 SD1/
 FAT 450,000-480,000 SD EB36:433
 GLUTAMIC-ACID 37,600-43,200 SD1/
 GLYCINE 7,750-9,350 SD1/
 HISTIDINE 4,350-4,650 SD1/
 14BETA-HYDROXYCODEINE PL JSG
 14BETA-HYDROXYCODEINONE PL JSG
 ISOLEUCINE 6,900-8,300 SD1/
 ISOTHEBAINE PL JE3:21
 LEUCINE 11,500-13,550 SD1/
 LINOLEIC-ACID 358,650-383,520 SD
 EB36:433
 LYSINE 7,200-8,150 SD1/
 METHIONINE 4,500-5,050 SD1/
 N-METHYLCORYDALDINE PL JSG
 O-METHYLCORYPALLINE PC22:247
 MORPHINE PL CRC
 (-)-NUCIFERINE PL JE3:21
 OLEIC-ACID 38,700-44,160 SD EB36:433
 OREOPHILINE PL CRC
 ORIENTALINONE PL CRC
 ORIPAVINE PL JSG
 OXYSANGUINARINE PL CRC
 PALMITIC-ACID 34,650-37,920 SD
 EB36:433
 PAPAVERINE PL JSG
 PAPAVERRUBINES PL CRC
 PHENYLALANINE 6,600-8,150

PROLINE 6,800-8,400 SD1/
 PROTOPINE PL JE3:21
 SALUTARIDINE PL CRC
 SERINE 7,400-8,850 SD1/
 STEARIC-ACID 9,900-12,000 SD
 EB36:433
 TETRAHYDROPALMATINE PL JE3:21
 THEBAINE 5,000-13,000 RT JAD
 THEBAINE 233-1,606 SH JAD
 THEBAINE 900-2,200 ST JAD
 THREONINE 6,350-7,800 SD1/
 TYROSINE 6,700-8,100 SD1/
 VALINE 8,450-10,600 SD1/

1/ Amino acids calculated by halving
 defatted seed meal analyses (Ind.J. Animal
 Sci. 48(11):830-832.1978)

PAPAYER SOMNIFERUM L.

“OPIUM POPPY”

ALANINE 11,780-12,637 SD USD
 ALKALOIDS 50,000-250,000 LX WOI
 ALLOCRYPTOPINE PL FNF
 APOMORPHINE PL FNF
 ARABINOSE FR WOI
 ARACHIDIC-ACID 1,720-1,920 SD WOI
 ARGININE 19,950-21,401 SD USD
 ASCORBIC-ACID 0 SD USD
 ASH 65,450-75,060 SD USD
 ASPARTIC-ACID 22,020-23,622 SD USD
 BERBERINE PL FNF
 BORON 15-95 SD BOB
 CALCIUM 13,807-16,214 SD USD
 CAOUTCHOUC 50,000-100,000 LX WOI
 CARBOHYDRATES 236,900-254,130 SD
 USD
 BETA-CAROTENE TR SD USD
 CERYL-PALMITATE LX WOI
 CHROMIUM 13.4 SD ABS 5/
 CITRIC-ACID LX WOI
 COBALT 0.4 SD ABS 5/
 CODAMINE PL FNF
 CODEINE 7,000-25,000 LX CCO
 CODEINE PL FNF
 CODEINE-N-OXIDE LX CCO
 CODEINONE PL FNF
 COPPER 16-23 SD USA WOI ABS 5/
 COPTISINE PL FNF
 CORYTUBERINE PL FNF
 CRYPTOPINE PL CCO
 CYCLOARTENOL LX CCO
 CYCLOARTENONE LX CCO
 CYCLOLAUDENOL LX CCO

- CYCLOLAUDENONE LX CCO
 CYSTINE 4,530-4,859 SD USD
 DESMETHYLEPIPORPHYROXINS PL
 FNF
 DEXTROSE 27,000-33,000 LX WOI
 DIASTASE FR HHB
 EMULSIN FR HHB
 ERYTHRITOL FR CCO
 FAT 400,000-550,000 SD HHB USD
 FIBER 58,080-71,818 SD USD
 GADOLEIC-ACID 400-429 SD USD
 GLAUDINE PL FNF
 GLUTAMIC-ACID 45,410-48,713 SD USD
 GLYCINE 11,230-12,047 SD USD
 GNOSCOPINE PL FNF
 HISTIDINE 5,280-5,664 SD USD
 HYDROCOTARNINE PL FNF
 HYDROXYCODEINE PL FNF
 INVERTASE LX WOI
 IODINE 0.006 SDS WOI
 IRON 91-143 SD USA ABS 5/
 ISOBOLDINE PL HHB
 ISOCORYPALMINE PL HHB
 ISOLEUCINE 9,050-9,708 SD USD
 KILOCALORIES 5,330-5,718 SD USD
 LACTIC-ACID 10,000-20,000 LX WOI
 LANTHOPINE PL FNF
 LAUDANIDINE PL FNF
 LAUDANINE PL CCO
 LAUDANOSINE PL CCO
 LECITHIN 28,000 SDS WOI
 LEUCINE 14,840-15,919 SD USD
 LINOLEIC-ACID 300,335-309,465 SD USD
 ALPHA-LINOLENIC-ACID 1,400-5,564
 SD USD
 LIPASE LX HHB
 LYSINE 10,990-11,789 SD USD
 MAGNESIUM 3,148-15,600 SD USA WOI
 MAGNOFLORINE LX HHB
 MALIC-ACID LX WOI
 MALTASE LX WOI
 MANGANESE 29-68 SD USA WOI
 ABS 5/
 D-MANNOHEPTULOSE FR CCO
 MECONIC-ACID 100,000 LX WOI
 MECONIN LX WOI
 MECONISIN LX WOI
 METHIONINE 4,700-5,042 SD USD
 N-METHYL-14-
 DEACETYLISOPORPHYROXINE PL
 JSG
 6-METHYL-CODEINE PL FNF
 MORPHINE 100,000 LX CCO
 MORPHINE 1,300-3,900 RT WOI
 MORPHINE 900-1,800 PL WOI
 MORPHINE 600-700 LF WOI
 MORPHINE 10-30 ST WOI
 MORPHINE 150-4,100 FR CCO WOI
 MORPHINE-N-OXIDE LX CCO
 MYOINOSITOL FR CCO
 NARCEINE PL FNF
 NARCERINE(SIC) 20 FR CCO
 NARCOTALINE PL JSG
 NARCOTINE 40,000-70,000 LX CCO
 NARCOTINE PL FNF
 NARCOTOLINE PL FNF
 NEOPINE PL CCO
 NIACIN 9.2-11.0 SD USD
 10-NONACOSANOL LX CCO
 NORNARCEINE PL FNF
 OLEIC-ACID 56,230-71,872 SD USD
 OPIONIN LX WOI
 OXALIC-ACID 16,200 SD WOI
 OXYCRYPTOPINE PL FNF
 OXYDASE LX WOI
 OXYMORPHINE PL FNF
 OXYNARCOTINE PL FNF
 PALAUDINE PL FNF
 PALMITIC-ACID 38,630-46,620 SD USD
 PALMITOLEIC-ACID 1,300-1,394 SD
 USD
 PAPAVERALDINE PL FNF
 PAPAVERAMINE PL FNF
 PAPAVERINE 20 FR CCO
 PAPAVERUBINES PL FNF
 PECTIN LX WOI
 PENTOSANS 30,000-36,000 SD WOI
 PHENYLALANINE 8,820-9,461 SD USD
 PHOSPHORIC-ACID LX WOI
 PHOSPHORUS 8,290-9,277 SD USD
 PHYTOSTEROLS 890-955 SD USD
 POTASSIUM 5,250-8,179 SD USA WOI
 PROLINE 10,620-11,392 SD USD
 PROTEASE LX WOI
 PROTEIN 175,256-198,532 SD USD
 PSEUDOMORPHINE PL FNF
 PYRROLIDINE LX CCO
 RETICULINE PL JSG
 RHOEADINE PL FNF
 RIBOFLAVIN 1.6-1.93 SD USD
 ROEMERINE PL FNF
 SALUTARIDINE PL FNF
 SALUTARIDINOLE PL FNF
 SANGUINARINE PL FNF
 SEDOHEPTULOSE FR CCO
 SERINE 9,870-10,588 SD USD
 SITOSTEROL LX WOI
 SODIUM 155-300 SD USA WOI

SQUALENE 59 SDS WOI
 STEARIC-ACID 5,890-8,036 SD USD
 SUCCINIC-ACID LX WOI
 SULFURIC-ACID LX WOI
 TARTARIC-ACID LX WOI
 THEBAINE 4,000 LX CCO
 THIAMIN 7.8-9.9 SD USD
 THREONINE 9,050-9,708 SD USD
 TOCOPHEROLS 200 SD WOI
 TRYPTOPHAN 2,550-2,735 SD USD
 TYROSINE 6,810-7,305 SD USD
 UREASE LX WOI
 VALINE 12,870-13,806 SD USD
 P-VINYL-PHENOL FR CCO
 VIT-B6 4.4-4.7 SD USD
 WATER 62,250-73,300 SD USD
 WAX 60,000-136,000 LX WOI
 ZINC 24-130 SD USA WOI ABS 5/

LX=latex, which dried is called opium; most
 data from Wealth of India. 5/
 Pak.J.Sci.Ind.Res.28:234.1985.

PARIS POLYPHYLLA SM.

“POLYPHYLLOUS PARIS”

DIOSCIN RH CCO
 DIOSGENIN RH CCO
 DIOSGENIN-3-O-ALPHA-L-
 ARABINOFURANOSYL-(1->4)-BETA-D-
 GLUCOPYRANOSIDE RH CCO
 DIOSGENIN-3-O-ALPHA-L-
 RHAMNOPYRANOSYL-(1->2)-BETA-D-
 GLUCOPYRANOSIDE RH CCO
 3-HYDROXYPREGNA-5,16-DIEN-20-ONE-
 3-O-CHACOTRIOSIDE PL JSG
 ALPHA-PARIDIN RH WOI
 PARIPHYLLIN-A PL JSG
 PARIPHYLLIN-B PL JSG
 ALPHA-PARISTYPHNIN RH WOI
 PENNOGENIN-3-O-ALPHA-L-
 ARABINOFURANOSYL-(1->4){ALPHA-
 L-RHAMNOPYRANOSYL-{1->2}}-
 BETA-D-GLUCOPYRANOSIDE RH
 CCO
 PENNOGENIN-3-O-ALPHA-L-
 ARABINOFURANOSYL-(1->4)-BETA-D-
 GLUCOPYRANOSIDE RH CCO
 PENNOGENIN-3-O-ALPHA-L-
 ARABINOFURANOSYL-(1->2)-BETA-D-
 GLUCOPYRANOSIDE-HEXACETATE
 RH CCO
 POLYPHYLLIN-A 180 BU CCO
 POLYPHYLLIN-C 90 BU CCO

POLYPHYLLIN-D 10,000 BU CCO
 POLYPHYLLIN-E 4,550 BU CCO
 POLYPHYLLIN-F 4,550 BU CCO
 POLYPHYLLIN-H 4,550 BU CCO
 STEROIDS RH CCO
 SUGAR 79,000 RH WOI

PARIS QUADRIFOLIA L.

“HERB PARIS”

L-ASPARAGINE PL CRC
 CITRIC-ACID PL CRC
 1-DEHYDROTRILLENNOGENIN PL CCO
 ECDYSTERONE PL CCO
 20-HYDROXYECDYSONE PL CCO
 PARIDIN PL CRC
 PARIDOL PL CRC
 PARISTYPHNIN PL CRC
 PECTIN PL CRC
 PENNOGENIN PL CCO

PASSIFLORA INCARNATA L.

“PASSIONFLOWER”

ALPHA-ALANINE NAP
 ALKALOIDS 250-300
 APIGENIN PL 411/
 CALCIUM 140-509 FR JAD
 CARBOHYDRATES 210,000-764,000 FR
 JAD
 FAT 33,000-120,000 FR JAD
 FIBER 73,000-265,000 FR JAD
 FLAVONOIDS 15,000-22,000
 D-FRUCTOSE
 D-GLUCOSE
 GLUTAMINE FR NAP
 GUM 2,500
 GYNOCARDIN 100 LF NAP
 HARMALINE
 HARMALOL
 HARMANE 1-120 NAP ABS
 HARMINE 70 SH
 HARMOL
 HOMOORIENTIN PL 411/
 IRON 16-58 FR
 ISOORIENTIN
 ISOVITEXIN PL 411/
 KAEMPFEROL PL 411/
 LUTENIN-2
 LUTEOLIN PL 411/
 MALTOL
 N-NONACOSANE
 ORIENTIN PL 411/
 PASSIFLORINE PL JSG

PHENYLALANINE LF FR SD ST NAP
 PHOSPHORUS 430-1,564 FR JAD
 PROLINE
 PROTEIN 23,000-84,000 FR JAD
 QUERCETIN LF NAP
 RAFFINOSE
 RUTIN PL 411/
 SACCHAROSE
 SAPONARETIN PL 411/
 SAPONARINE PL 411
 SCOPOLETIN RT
 SITOSTEROL
 STIGMASTEROL
 SUCROSE
 TYROSINE LF SD ST
 UMBELLIFERONE RT
 VALINE LF SD ST NAP
 VITEXIN PL 411/

PASSIFLORA QUADRANGULARIS
 L.

“GRANADILLA”

ASCORBIC-ACID 150-2,680 FR CRC
 ASCORBIC-ACID 150-695 SD CRC
 ASH 4,000-71,000 FR CRC
 ASH 8,000-37,000 SD CRC
 CALCIUM 90-2,500 FR CRC
 CALCIUM 90-415 SD CRC
 CARBOHYDRATES 43,000-768,000 FR
 CRC
 CARBOHYDRATES 176,000-815,000
 SD CRC
 BETA-CAROTENE 0 FR CRC
 BETA-CAROTENE 0.2-1 SD CRC
 FAT 2,000-95,000 FR CRC
 FAT 13,000-60,000 SD CRC
 FIBER 7,000-245,000 FR CRC
 FIBER 56,000-259,000 SD CRC
 HCN SD CRC
 IRON 6-143 FR CRC
 IRON 29-134 SD CRC
 KILOCALORIES 200-3,850 FR CRC
 KILOCALORIES 810-3,750 SD CRC
 NIACIN 38-680 FR CRC
 NIACIN 19-88 SD CRC
 PASSIFLORINE LF CCO
 PASSIFLORINE RT JFM
 PHOSPHORUS 170-3,035 FR CRC
 PHOSPHORUS 390-1,800 SD CRC
 PROTEIN 7,000-130,000 FR CRC
 PROTEIN 19,000-88,000 SD CRC
 RIBOFLAVIN 0.3-5 FR CRC
 RIBOFLAVIN 1.2-6 SD CRC

THIAMIN 0 FR CRC
 THIAMIN 0 SD CRC
 WATER 800,000-944,000 FR CRC
 WATER 784,000 SD CRC

PASTINACA SATIVA L.

“PARSNIP”

CIS-ALLOOCIMENE RT NAP
 ALUMINUM 1-35 RT AAS
 5-ALPHA-ANDROST-16-EN-3-ONE RT
 NAP
 ANGELICIN 34 RT NAP
 APTERIN RT NAP
 ARSENIC 0.01 RT AAS
 ASCORBIC-ACID 160-830 RT CRC USA
 ASH 9,800-90,000 RT CRC USA
 ASH 12,000 SD CRC
 BERGAPTEN 3.2-3,800 RT NAP WOI
 BERGAPTEN SD HHB
 BETA-BISABOLENE RT NAP
 BORON 4-25 RT AAS
 BROMINE <1 RT AAS
 CADMIUM 0.01-0.4 RT AAS
 CALCIUM 315-3,525 RT AAS CRC
 USA
 CAMPHENE RT NAP
 CARBOHYDRATES 175,00-902,000 RT
 CRC USA
 BETA-CAROTENE 0.2-1 RT CRC
 CHROMIUM 0.01-0.1 RT AAS
 COBALT <0.005 RT AAS
 COPPER 0.8-12 RT AAS USA
 P-CYMENE RT NAP
 BETA-TRANS-FARNESENE RT NAP
 FAT 3,000-24,000 RT CRC USA
 FAT 173,000-288,000 SD CRC WOI
 FIBER 15,000-97,700 RT CRC USA
 FLUORINE 0.1 RT AAS
 FOLACIN 0.6-3.6 RT USA
 N-HEPTACOSANE SD NAP
 N-HEXACOSANE SD NAP
 IMPERATORIN 1,700 RT WOI
 IMPERATORIN LF JCE17:1859
 IMPERATORIN SD HHB
 IRON 4-112 RT CRC USA
 ISOBERGAPTEN PL JSG
 ISOIMPERATORIN SD NAP
 ISOPIMPINELLIN SD NAP
 ISORHAMNETIN LF NAP
 ISORHAMNETIN-3-GLUCOSIDE-4-
 RHAMNOSIDE PL HHB
 KAEMPFEROL SD NAP
 KILOCALORIESS 650-3,664 RT USA

LEAD 0.01-0.1 RT AAS
 LIMONENE RT NAP
 LINOLEIC-ACID 36,330 SD WOI
 LINOLEIC-ACID 410-2,000 RT USA
 ALPHA-LINOLENIC-ACID 30-145 RT USA
 MAGNESIUM 230-2,100 RT AAS USA
 MANGANESE 2-33 RT AAS USA
 MERCURY 0.001-0.002 RT AAS
 5-METHOXYPSORALEN 7.3 RT NAP
 MOLYBDENUM 0.1-0.5 RT AAS
 MUFA 1,120-5,470 RT USA
 MYRCENE RT NAP
 MYRISTIC-ACID 30-145 RT USA
 MYRISTICIN 183,000-662,000 EO(RT) NAP
 NIACIN 2-34 RT CRC USA
 NICKEL 0.04-1.6 RT AAS
 NITROGEN 3,000-33,160 RT AAS
 N-NONACOSANE SD NAP
 N-NONADECANE SD NAP
 CIS-BETA-OCIMENE RT NAP
 TRANS-BETA-OCIMENE RT NAP
 N-OCTACOSANE SD NAP
 N-OCTADECANE SD NAP
 N-OCTYL-ALCOHOL SD HHB
 OCTYL-BUTYRATE PL WOI
 OCTYL-PROPIONATE PL WOI
 OLEIC-ACID 1,020-158,000 SD NAP USA WOI
 OXALIC-ACID 205 RT WBB
 PALMITIC-ACID 300-1,730 RT USA
 PALMITIC-ACID 1,730-2,880 SD HHB
 PALMITOLEIC-ACID 30-145 RT USA
 PANTOTHENIC-ACID 6-29 RT USA
 PASTINACIN SD HHB
 PETROSELINDIOLEIN SD HHB
 PETROSELINIC-ACID 79,580-132,500 SD HHB NAP WOI
 PETROSELINOLEIN SD HHB
 ALPHA-PHELLANDRENE RT NAP
 BETA-PHELLANDRENE RT NAP
 PHOSPHORUS 400-7,365 RT AAS CRC USA
 PIMPINELLIN PL JSG
 BETA-PINENE RT NAP
 POTASSIUM 3,300-40,000 RT AAS CRC USA
 PROTEIN 12,000-85,000 RT CRC USA
 PROTEIN 150,000-155,000 SD CRC
 PSORALEN 7.1-10.5 RT NAP
 PUFA 470-2,300 RT USA
 PYRUVIC-CARBOXYLASE RT WOI
 QUERCETIN LF NAP

QUERCETIN-3-O-BETA-D-GLUCOSIDE LF NAP
 QUERCETIN-3-RHAMNOGLUCOSIDE LF NAP
 RIBOFLAVIN 0.5-4 RT CRC USA
 RUBIDIUM 0.6-10 RT AAS
 RUTIN PL HHB
 SABINENE RT NAP
 SELINIUM 0.001-0.002 RT AAS
 SILICON 2-50 RT AAS
 SFA 500-2,445 RT USA
 SODIUM 100-575 RT CRC USA
 SPHONDIN RT HHB
 STEARIC-ACID 140-685 RT USA
 SUBERIN RT NAP
 SULFUR 270-11,050 RT AAS
 ALPHA-TERPINENE RT NAP
 GAMMA-TERPINENE RT NAP
 TERPINOLENE 253,000-666,000 EO(RT) NAP
 THIAMIN 0.8-11.4 RT CRC USA
 ALPHA-THUJENE RT NAP
 N-TRIACONTANE SD NAP
 TRIPETROSELINENE SD HHB
 UMBELLIFERONE PL JSG
 VIT-B6 0.9-4.4 RT USA
 WATER 724,000-812,000 RT CRC
 XANTHOTOXIN 800 LF WOI
 XANTHOTOXIN 26-1,000 RT NAP WOI
 XANTHOTOXOL PL HHB
 WATER 724,000-810,000 RT AAS USA WOI
 ZINC 5-70 RT AAS USA

NAP = NAPRALERT AAS=ACTA AGRIC
 SCAND SUPPL 22.1980; H2O=81%
 ZMB=5.26 X APB

PAULLINIA CUPANA KUNTH EX
 H.B.K.

"GUARANA"

ADENINE SD AYL
 ASH 14,200 SD ABS
 CAFFEINE 25,000-76,000 SD AYL CRC
 D-CATECHIN SD AYL
 CATECHUTANNIC-ACID SD CRC
 CHOLINE SD CRC
 FAT 30,000 SD AYL
 GUANINE SD AYL
 GUARANINE SD CRC
 HYPOXANTHINE SD CRC
 MUCILAGE SD CRC
 PROTEIN 98,600 SD ABS

RESIN 70,000 SD AYL
 SAPONIN SD AYL
 STARCH 50,000-60,000 SD AYL
 TANNIN 85,000-120,000 SD AYL HHB
 THEOBROMINE 330 SD CRC
 THEOPHYLLINE 570 SD ABS CRC
 TIMBONINE SD CRC
 XANTHINE SD CRC

***PAULLINIA YOKO* SCHULTES &
 KILLIP**

“YOKO”

ASH 61,000 BK CRC
 CAFFEINE 27,300 BK CRC
 CAFFEINE LF 499/
 WATER 123,000 BK CRC

***PAUSINYSTALIA JOHIMBE* (K.
 SCHUM.) PIERRE**

“YOHIMBE”

AJMALINE BK CRC
 ALLOYOHIMBINE BK CRC
 CORYNANTHEINE BK CRC
 CORYNANTHINE BK CRC
 19-DEHYDROYOHIMBINE PL JSG
 DIHYDROCORYNANTHEINE BK CRC
 DIHYDROSISIRIKINE PL JSG
 PSEUDYOYOHIMBINE BK CRC
 QUEBRACHINE BK CRC
 TANNIN BK CRC
 TETRAHYDROMETHYLCORYNANTHEINE
 BK CRC
 YOHIMBINE BK CRC
 ALPHA-YOHIMBINE PL JSG

***PEGANUM HARMALA* L.**

“HARMEL”

“SYRIAN RUE”

ASH 34,000-105,250 PL CRC
 CALCIUM 5,600 PL CRC
 COPPER 9 PL CRC
 DEOXYPEGANINE PL JSG
 DEOXYVASICINONE SD CRC
 9,14-DIHYDROXYOCTADECANOIC-
 ACID PL JSG
 DIPEGENE SD CRC
 FAT 15,000-46,450 PL CRC
 FAT 135,000-175,000 SD CRC
 FIBER 57,000-176,475 PL CRC
 HARMALINE SD CRC

HARMALOL SD CRC
 HARMAN SD CRC
 HARMINE SD CRC
 ISOPEGANINE SD CRC
 PEGAMINE PL JSG
 PEGANINE PL JSG
 PEGANOL PL JSG
 PEGANONES PL JSG
 PHOSPHORUS 600 PL CRC
 PROTEIN 57,000-17,650 PL CRC
 PROTEIN 294,000-352,000 SD CRC
 RUINE PL JSG
 VASCINONES PL JSG
 VASICINONE SD CRC
 WATER 677,000 PL CRC

***PELARGONIUM GRAVEOLENS*
 (L.) L'HER EX AIT.**

“SCENTED GERANIUM;
 ROSE GERANIUM”

ACETALDEHYDE EO BML
 ACETIC-ACID EO AYL
 ACETONE EO BML
 ALCOHOLS (60-70%EO) AYL
 BETA-BISABOLENE EO BML
 BOIS-DE-ROSE-OXIDE 1-2 EO BML
 BORNEOL EO BML
 ALPHA-BOURBONENE EO BML
 BETA-BOURBONENE EO BML
 BUTANAL EO BML
 BUTANE EO BML
 BUTANOL EO BML
 GAMMA-CADINENE EO BML
 DELTA-CADINENE EO BML
 ALPHA-CALACORENE EO BML
 CALAMENENE EO BML
 CAPRYLIC-ACID EO AYL
 CARYOPHYLLENE EO BML
 CITRAL EO AYL
 CITRONELLAL EO AYL
 CITRONELLOL 21-1,176 PL BML HHB
 WOI
 L-CITRONELLOL EO FUNGICIDE AYL
 CITRONELLYL-ACETATE EO AYL
 CITRONELLYLDIETHYLAMINE EO
 AYL
 CITRONELLYL-FORMATE 1-2 EO BML
 COPAENE EO BML
 AR-CURCUMENE EO AYL
 P-CYMENE 1-2 EO BML
 DECYL-ALDEHYDE EO BML
 CIS-DEHYDROCITRONELLOL EO AYL

TRANS-DEHYDROCITRONELLOL EO
 AYL
 DIMETHYL-SULFIDE
 BETA-ELEMENE EO AYL
 EO 800-4,000 PL AYL
 10-EPI-GAMMA-EUDESOL EO BML
 EPOXYLINALOOL 1-4 EO BML
 ESTERS (20-30%EO) AYL
 ETHANOL EO AYL
 EUGENOL EO BML
 FORMIC-ACID EO AYL
 FURAN EO BML
 FURAPELAGONE-A EO BML
 FURAPELAGONE-B EO BML
 2-FURFURAL EO BML
 GERANIAL 2-12 EO BML
 GERANIOL 2-1,400 PL BML HHB WOI
 GERANYL-ACETATE EO AYL
 GERANYL-TIGLATE EO AYL
 GERMATRATRIENE EO AYL
 GUAIA-6,9-DIENE PL BML
 2-HEXANONE EO BML
 3-HEXEN-1-OL EO BML
 CIS-3-HEXENOL 1 EO BML
 HEXYL-FORMATE EO BML
 HUMULENE EO AYL
 7-HYDROXYDIHYDROCITRONELLOL
 EO BML
 7-HYDROXY-6,7-DIHYDROGERANIOL
 EO BML
 ISOAMYL-ALCOHOL EO WOI
 ISOMENTHONE 8-38 EO BML
 ISOCTANE EO BML
 ISOPRENE EO BML
 ISOPROPYL-FORMATE EO BML
 ISOPULEGOL EO BML
 JUNENOL EO AYL
 LIMONENE 1-3 EO BML
 LINALOOL 30-505 PL BML HHB
 METHANOL EO BML
 MENTHOL 2-1,852 PL HHB
 MENTHONE 8-38 EO BML
 2-METHYL-BUTANOL EO BML
 2-METHYL-BUTANAL-TRANS-2-
 METHYL-3-BUTENAL EO BML
 3-METHYL-BUTANOL EO BML
 3-METHYL-2-BUTANONE EO BML
 2-METHYL-3-BUTENAL
 2-METHYL-3-BUTEN-2-OL EO BML
 2-METHYLBUTYL-FORMATE EO BML
 3-METHYLBUTYL-FORMATE EO BML
 METHYL-BUTYRATE EO BML
 3-METHYL-CYCLO-PENTANONE EO
 BML

METHYL-FORMATE EO BML
 METHYL-HEPTENONE 2-9 EO BML
 METHYL-HEXYL-CARBINEOL EO WOI
 2-METHYL-3-PENTANONE EO BML
 4-METHYL-2-PENTANONE EO BML
 2-METHYLOPPROPYL-FORMATE EO
 BML
 METHYL-PENTANOL EO WOI
 2-METHYL-PROPANAL EO BML
 ALPHA-MUROLLENE EO BML
 GAMMA-MUROLLENE EO BML
 MYRCENE 1-2 EO BML
 NEOISOMENTHOL EO BML
 NERAL 2-12 EO BML
 11-NORBOURBANANONE EO BML
 6-OXO-6,7-DIHYDROCITRONELLIC-
 ACID EO BML
 PELARGONIC-ACID HHB
 1,3-PENTADIENE EO BML
 2-PENTANONE EO BML
 ALPHA-PHELLANDRENE EO BML
 BETA-PHELLANDRENE EO BML
 PHENYLETHYL-ALCOHOL 2-8
 ALPHA-PINENE 1-3 EO BML
 BETA-PINENE EO BML
 2-PROPANOL EO BML
 PROPIONIC-ACID EO AYL
 PROPYL-FORMATE EO BML
 CIS-ROSE-OXIDE 1-2 EO BML
 SABINENE EO BML
 ALPHA-SANTALENE
 SELINA-3,7(11)-DIENE
 SELINA-4(14),7(11)-DIENE EO BML
 11-SELINEN-4-ALPHA-OL EO BML
 ALPHA-TERPINEOL 4-22 EO BML
 TIGLIC-ACID EO BML
 TOLUENE EO BML

PERIDERIA GAIRDNERI (HOOK.
 & ARN.) MATHIAS

“SQUAW ROOT”

ALANINE 2,603 RT 457/
 ARGININE 8,954 RT 457/
 ASCORBIC-ACID 112-302 RT457/
 ASPARTIC-ACID 7,556 RT 457/
 CALCIUM 600 RT 457/
 BETA-CAROTENE 2-5 RT 457/
 CYSTINE-(half) 1,334 RT 457/
 GLUTAMIC-ACID 12,319 RT 457/
 FAT 16,100 RT 457/
 FIBER 52,500 RT 457/
 GLUTAMIC-ACID 12,319 RT 457/

GLYCINE 1,842 RT 457/
 HISTIDINE 1,080 RT 457/
 IRON 32 RT 457/
 ISOLEUCINE 2,413 RT 457/
 LEUCINE 3,366 RT 457/
 LYSINE 2,984 RT 457/
 MAGNESIUM 500 RT 457/
 METHIONINE 889 RT 457/
 PHENYLALANINE 1,714 RT 457/
 PHOSPHORUS 2,600 RT 457/
 POTASSIUM 12,900 RT 457/
 PROLINE 5,524 RT 457/
 PROTEIN 635,000 RT 457/
 SERINE 2,667 RT 457/
 STARCH 693,000 RT 457/
 SUGARS 161,900 RT 457/
 THREONINE 2,413 RT 457/
 TRYPTOPHAN 762 RT 457/
 TYROSINE 1,905 RT 457/
 VALINE 3,175 RT 457/
 WATER 628,600 RT 457/

***PERILLA FRUTESCENS* (L.)**

BRITTON

“PERILLA”

(2E,4E,63)-ALLOFARNESENE PL JSG
 (2Z,4E,63)-ALLOFARNESENE PL JSG
 APIGENIN SD CRC
 ASCORBIC-ACID 460-3,286 LF CRC
 ASCORBIC-ACID 0-200 SD CRC
 ASH 10,000-85,000 SD CRC
 ASH 20,000-143,000 LF CRC
 CAFFEIC-ACID PL JSG
 CALCIUM 1,400-3,500 SD CRC
 CALCIUM 1,970-14,071 LF CRC
 CALCIUM 12,670 PL SMO
 CARBOHYDRATE 571,000 LF CRC
 CARBOHYDRATE 69,000-585,000 SD CRC
 CARBOHYDRATE 80,000 PL CRC
 BETA-CAROTENE 44-313 LF CRC
 BETA-CAROTENE 7-66 SD CRC
 CITRAL PL CCO
 COPPER 17 PL SMO
 CYANIDIN-3,5-DIGLUCOSIDE LF CRC
 DELPHINIDIN LF WOI
 EO 1,000-13,000 PL WOI
 FAT 13,000-481,000 SD CRC
 FAT 6,000 LF CRC
 FIBER 15,000 LF CRC
 FIBER 37,000-280,000 SD CRC
 FURYLKETONE PL CCO
 GLUCOSE LF WOI

IRON 67-479 LF CRC
 IRON 13-135 SD CRC
 IRON 460 PL SMO
 L-LIMONENE PL CRC
 LINALOOL PL JSG
 LUTEOLIN SD CRC
 MAGNESIUM 3,830 PL SMO
 MANGANESE 180 PL SMO
 NIACIN 5-42 SD CRC
 NIACIN 8-57 LF CRC
 PERILLALDEHYDE 400-825 PL CCO
 PERILLANIN-CHLORIDE PL CRC
 PERILLARTINE PL CRC
 PHENYLPROPANOIDS PL CCO
 PHOSPHORUS 330-5,339 SD CRC
 PHOSPHORUS 730-5,214 LF CRC
 ALPHA-PINENE PL JSG
 POTASSIUM 6,500-46,429 LF CRC
 POTASSIUM 26,100 PL SMO
 PROTEIN 26,000-318,000 SD CRC
 PROTEIN 34,000 LF CRC
 PROTOCATECHUIC-ACID LF WOI
 PRUNASIN PL JSG
 RIBOFLAVIN 1-8 SD CRC
 RIBOFLAVIN 3-23 LF CRC
 ROSMARINIC-ACID PL JSG
 SCUTELLEREIN PL JSG
 SODIUM 20-1,429 LF CRC
 SODIUM 204 PL SMO
 THIAMIN 1-7 SD CRC
 THIAMIN 1-5 LF CRC
 WATER 860,000 LF CRC
 WATER 63,000-178,000 SD CRC WOI
 ZINC 50 PL SMO

***PERSEA AMERICANA* MILLER**

“AVOCADO”

ALANINE 960-4,625 FR JEL USA
 ANETHOLE BK WOI
 D-ARABINITOL SD HHB
 ARGININE 470-2,293 FR JEL USA
 ASCORBIC-ACID 65-994 FR CRC JEL USA
 ASH 6,000-56,000 FR CRC JEL
 ASPARTIC-ACID 2,270-11,000 FR JEL USA
 BIOTIN 0.1-0.4 FR WOI
 BORON 5-13 FR BOB
 CAFFEIC-ACID FR CRC(FSN)
 CALCIUM 60-964 FR CRC JEL USA
 CAMPESTEROL PL HHB
 CARBOHYDRATE 8,000-629,000 FR CRC JEL WOI

ALPHA-CAROTENE 0.19-1 FR JAF37:657
 BETA-CAROTENE 0.3-27 FR CRC
 EPSILON-CAROTENE
 CHLOROGENIC-ACID FR CRC(FSN)
 CHOLESTEROL PL HHB
 COPPER 2-11 FR JEL USA
 P-COUMARIC-ACID FR CRC(FSN)
 P-COUMARYLQUINIC-ACID FR
 CRC(FSN)
 CRYPTOXANTHIN 0.38-2 FR JAF37:657
 CYCLOARTENOL PL HHB
 CYSTINE 170-816 FR JEL
 DOPAMINE FR HHB
 EO 5,000 LF HHB
 D-ERYTHRO-D-GALACTO-OCTITOL FR
 HHB
 D-ERYTHRO-L-GLUCO-NONULOSE FR
 HHB
 FAT 61,000-864,000 FR CRC
 FIBER 10,000-106,000 FR CRC JEL
 FOLACIN 0.5-2.8 FR USA
 FOLIC-ACID 0.3-2.4 FR JEL WOI
 GALACTITOL SD HHB
 GLUTAMIC-ACID 1,660-8,045 FR JEL
 USA
 D-GLYCERO-D-GALACTO-HEPTITOL
 FR HHB
 D-GLYCERO-D-GALACTO-HEPTOSE FR
 HHB
 D-GLYCERO-D-GALACTO-OCTULOSE
 FR HHB
 GLYCEROL FR HHB
 D-GLYCERO-D-MANNO-OCTULOSE FR
 HHB
 GLYCINE 660-3,226 FR JEL USA
 HENTRIACOSANE FR HHB
 HEPTACOSANE FR HHB
 HISTIDINE 230-1,127 FR JEL USA
 IRON 6-71 FR CRC JEL USA
 ISOLEUCINE 570-2,759 FR JEL USA
 ISOLUTEIN FR HHB
 KILOCALORIES 940-6700 FR CRC JEL
 LECITHIN FR WOI
 LEUCINE 990-4,780 FR JEL USA
 LINOLEIC-ACID 24,340-505,440 FR HHB
 LINOLENIC-ACID 245-28,510 FR HHB
 LUTEIN 3.2-16 FR JAF37:657
 LYSINE 750-3,653 FR JEL
 MAGNESIUM 370-1,740 FR JEL USA
 MANGANESE 2-10 FR JEL USA
 D-MANNOKETOHEPTOSE FR WOI
 D-MANNOHEPTULOSE FR HHB
 METHIONINE 290-1,438 FR JEL USA
 METHYL-CHAVICOL LF WOI
 24-METHYLENE-CYCLOARTENOL PL
 HHB
 MUFA 96,080-373,400 FR JEL USA
 MYOINOSITOL FR HHB
 NIACIN 14-101 FR CRC JEL
 NONACOSANE FR HHB
 OLEIC-ACID 27,450-691,200 FR HHB
 PALMITIC-ACID 4,270-266,000 FR HHB
 JEL
 PALMITOLEIC-ACID 6,430-25,000 FR
 USA
 PANTOTHENIC-ACID 8-37.7 FR JEL
 WOI
 PARAFFIN LF HHB
 PENTACOSANE FR HHB
 PERSEITOL 89,000 SD HHB
 PHENYLALANINE 540-2,643 FR JEL
 USA
 PHOSPHORUS 260-3,030 CRC JEL USA
 PHYTOSTEROLS FR HHB
 PINENE LF WOI
 POTASSIUM 2,780-27,470 FR CRC JEL
 USA
 PROLINE 620-2,993 FR JEL USA
 PROTEIN 11,000-81,000 FR CRC JEL
 PUFA 19,550-76,000 FR JEL USA
 PYRIDOXINE 6-23 FR WOI
 QUERCETIN LF HHB
 RIBOFLAVIN 1-7.7 FR CRC JEL
 SERINE 810-3,148 FR JEL USA
 SEROTONIN FR HHB
 SFA 24,370-94,700 FR JEL USA
 BETA-SITOSTEROL LF HHB
 SODIUM 20-520 FR CRC JEL USA
 STEARIC-ACID 120-4,320 FR HHB JEL
 D-TALOHEPTULOSE FR HHB
 TANNIN 47,000 LF HHB
 TARTARIC-ACID 200 FR WOI
 THIAMIN 0.5-4.2 FR CRC JEL
 THREONINE 530-2,565 FR JEL USA
 ALPHA-TOCOPHEROL 13-49 FR USA
 TRIACOSANE FR HHB
 1,2,4-TRIHIDROXYHEPTADECA-16-ENE
 PL HHB
 TRYPTOPHAN 170-816 FR JEL USA
 TYRAMINE FR HHB
 TYROSINE 390-1,904 FR JEL USA
 VALINE 970-3,770 FR JEL USA
 VIOLAXANTHIN FR HHB
 VIT-B6 10.9 FR JAL
 VIT-D 0.1-
 VOLEMITOL SD HHB
 WATER 716,000-830,000 FR CRC USA
 ZINC 4-16 FR JEL USA

PETASITES JAPONICUS**(SIEBOLD & ZUCC.) MAXIM.****"BUTTERBUR"**

9-ACETOXYFUKINANOLIDE PL JSG
 6-ACETYLFURANOFUKINOL RH CCO
 ALBOPETASIN RH CCO
 ANGELIC-ACID BD CCO
 6-ANGELYLFURANOFUKINOL RH CCO
 ARSENIC ND PL CPB38:2205
 ASCORBIC-ACID 315-5,725 PE USA
 ASH 14,600-26,545 PE USA
 BAKKENOLIDE-A BD CCO
 BAKKENOLIDE-B BD CCO
 BAKKENOLIDE-C BD CCO
 BAKKENOLIDE-D BD CCO
 BARIUM 40-50 PL CPB38:2205
 BROMINE 18-40 PL CPB38:2205
 BUTYRALDEHYDE PL HHB
 CALCIUM 1,030-18,725 PE USA
 CALCIUM 13,000-14,000 PL CPB38:2205
 CAPROIC-ACID FL CCO
 CAPRYLIC-ACID FL CCO
 CARBOHYDRATES 19,000-656,360 PE
 CRC USA
 BETA-CAROTENE 0.03-0.5 PE USA
 CHLORINE 10,000-11,000 PL CPB38:2205
 CHROMIUM 20-23 PL CPB38:2205
 COPPER 15-16 PL CPB38:2205
 EREMOPHILINONE PL JSG
 EREMOPHILINE RH CCO
 FAT 400-7,270 PE USA
 FIBER 13,000-236,360 PE USA
 FUKIIC-ACID FL CCO
 FUKINANOLIDE PL HHB
 FUKINOLIDE PL HHB
 S-FUKINOLIDE PL HHB
 FUKINONE PL HHB
 FUKINOTOXIN PL JSG
 FURANOFUKINOL RH CCO
 FURANOJAPONIN RH CCO
 S-FURANOPETASITIN RH CCO
 FURINOTOXIN SH CCO
 FUROEREMOPHILONE PL 411/
 6-HYDROXYEREMOPHILENOLIDE RH
 CCO
 INTEGERRIME PL 411/
 INULIN RT 411/
 IODINE ND PL CPB38:2205
 IRON 1-18 PE USA
 IRON 2,000-2,100 PL CPB38:2205
 ISOPETASOSIDE FL CCO
 S-JAPONIN PL JSG

KAEMPFEROL PL CCO
 KILOCALORIES 140-2545 PE USA
 LEAD ND PL CPB38:2205
 LIGULARONE RH CCO
 MAGNESIUM 140-2,545 PE USA
 MANGANESE 70-100 PL CPB38:2205
 MOLYBDENUM ND PL CPB38:2205
 MUCILAGE RT 411/
 NEOPETASITININE SH CCO
 NIACIN 2-36 PE USA
 NICKEL ND PL CPB38:2205
 PECTIN RT 411/
 PETASALBIN RH CCO
 PETASALBIN-METHYL-ETHER RH
 CCO
 PETASININE PL JSG
 PETASITALONE PL JSG
 PETASITIN PE CCO
 PETASITININE SH CCO
 PETASINOLIDES PL 411/
 PETASINOSIDE PL JSG
 PETASOSIDE PL JSG
 PHOSPHORUS 120-2,180 PE USA
 PHOSPHORUS 400-1,800 PL CPB38:2205
 POTASSIUM 6,550-11,900 PE USA
 POTASSIUM 35,000-42,000 PL
 CPB38:2205
 PROTEIN 3,900-70,900 PE USA
 RIBOFLAVIN 0.2-3.6 PE USA
 RUBIDIUM 18-26 PL CPB38:2205
 ALPHA-SANTALENE RH CCO
 SENECTIONINE PL 411/
 SENKIRKINE 1 SH CCO
 SENKIRKINE 26 RH CCO
 BETA-SITOSTEROL PL HHB
 SODIUM 70-1,270 PE USA
 STRONTIUM 36-160 PL CPB38:2205
 SULFUR 6,500-7,300 PL CPB38:2205
 THIAMIN 0.2-3.6 PE USA
 TITANIUM 170-200 PL CPB38:2205
 WATER 945,000 PE USA
 ZINC 21-60 PL CPB38:2205

PETROSELINUM CRISPUM**(MILLER) NYMAN EX A. W.
HILL****"PARSLEY"**

6-ACETYL-7-HYDROXY-COUMARIN 5
 SD NAP
 1-ALLYL-2,3,4,5-TETRAMETHOXY-
 BENZENE 5-26,600 SD GEO JAD NAP
 ALUMINUM 6-390 PL AAS USG

APIGENIN PL PAS
 APIGENIN-7-0-BETA-D-GLUCOSIDE PL
 HHB NAP
 APIGENIN-7-GLUCOAPIOSIDE PL HHB
 APIIN SD AYL
 APIOLE 0.36 LF JKA33:62 2/
 APIOLE 22 LF JKA33:62
 APIOL (TR-)19,650-36,580 SD NAP
 APIOSE PL HHB
 ARSENIC 0.0095-0.21 PL AAS USG
 ASCORBIC-ACID 430-7,695 PL CRC
 USA 1/
 ASH 18,000-202,464 PL CRC USA USG
 BARIUM 28-40 PL USG
 BENZALDEHYDE LF NAP
 BENZOIC-ACID4-0-BETA-D-GLUCOSIDE
 3 SH NAP
 BERGAPTEN RT HHB
 BERGAPTEN SD AYL
 BERGAPTEN 21-2,000 SH AYL NAP
 BICYCLOGERMACRENE 5.16 LF
 JKA33:62
 BETA-BISABOLENE 2.76 LF JKA33:62
 BETA-BISABOLENE 22 SD JKA33:62
 BORON 4-54 PL AAS USG
 BROMINE 3-21 PL AAS
 3-N-BUTYL-PHTHALIDE SD NAP
 DELTA-CADINENE 1.38 LF JKA33:62
 DELTA-CADINENE 109 SD JKA33:62
 GAMMA-CADINENE LF NAP
 ALPHA-CADINOL 0.18 LF JKA33:62
 DELTA-CADINOL LF NAP
 CADMIUM 0.01-0.57 PL AAS USG
 CAFFEIC-ACID ST NAP
 CALCIUM 1,000-16,850 PL AAS CRC
 USA USG
 CAMPHENE 0.24 LF JKA33:62
 CAMPHENE 3-490 SD JKA33:62 JAD
 NAP
 CARBOHYDRATES 69,100-590,805 PL
 CRC USA
 DELTA-3-CARENE 0.12 LF JKA33:62
 BETA-CAROTENE 15-267 PL CRC
 USA 1/
 CARVEOL 3.9 LF JKA33:62
 BETA-CARYOPHYLLENE 2.46 LF
 JKA33:62
 BETA-CARYOPHYLLENE 6.6-770 SD
 NAP
 CHALCONE-FLAVONOID-ISOMERASE
 TC NAP
 CHALCONE-SYNTHASE TC NAP
 CHLOROGENIC-ACID ST NAP
 CHROMIUM 0.06-0.7 PL AAS USG
 CHRYSOERIO-7-O-BETA-D-GLU-
 COSIDE SD NAP
 COBALT 0.001-0.2 PL AAS USG
 ALPHA-COPAENE 7.92 LF JKA33:62
 COPPER 1-12 PL AAS USA USG
 P-COUMARIC-ACID ST NAP
 CRYPTONE LF NAP
 ALPHA-CUBEENE 1.86 LF JKA33:62
 P-CYMENE 1.44 LF JKA33:62
 P-CYMENE 34 SD JKA33:62
 P-CYMENE-8-OL 4.38 LF JKA33:62
 P-CYMENE-8-OL 28 SD JKA33:62
 6,7-DIHYDRO-8,8-DIMETHYL-
 2(H),8(H)BENZO-(1,2B,5,4B'-DIPYRAN-
 2-6-DIONE 12 SD NAP
 DIMETHYL-BENZOFURAN LF NAP
 DIMETHYL-SULFIDE LF NAP
 2,3-DIOXA-1-METHYL-4-(METHYL-
 ETHENYL)-BICYCLO-(2,2,2)-OCT-5-
 ENE LF NAP
 3,8-DIOXA-4-METHYL-7-(METHYL-
 ETHENYL)-TRICYCLO-(5,1,0)-OCTANE
 LF NAP
 ALPHA-ELEMENE LF NAP
 BETA-ELEMENE 5.4 LF JKA33:62
 GAMMA-ELEMENE LF NAP
 ELEMICIN 18 LF JKA33:62
 ELEMICIN 821 SD JKA33:62
 EO 600 LF JKA33:62
 EO (600-) 15,000-70,000 SD GEO (NAP)
 EO 500-3,000 PL AYL GEO
 EO 500-1,000 RT HHB
 ERIODICTYOL PL PAS
 ESTRAGOLE 1.6 LF JKA33:62
 ETHANOL PL BML
 FALCARINONE RT HHB
 BETA-FARNESENE 3.9 LF JKA33:62
 BETA-FARNESENE 25 SD JKA33:62
 FAT 130,000-330,000 SD AYL CRC
 FAT 3,000-53,218 PL CRC USA
 FIBER 12,000-202,464 PL CRC USA
 FLAVANONE-SYNTHASE TC NAP
 FLUORINE 0.6-7.8 PL AAS
 FOLACIN 2-17 PL USA
 GERANIOL 1.26 LF JKA33:62
 GERMACRENE-D 6.9 LF JKA33:62
 4-BETA-D-GLUCOPYRANOSYL-
 OXYBENZOIC-ACID 165 SD NAP
 GLYCOLIC-ACID RT NAP
 GLYCOLIC-ACID SD HHB
 GRAVEOLONE TC NAP
 ALPHA-GURJUNENE 4.92 LF
 JKA33:62
 HERACLINOL 3.7 SD NAP

- HEXADECENOIC-ACID 0.24 LF
 JKA33:62
 HEXAN-1-AL LF NAP
 n-HEXANAL 0.4 LF JKA33:62
 N-HEXANOL 0.2 LF JKA33:62
 TRANS-2-HEXENAL 12.5 LF JKA33:62
 TRANS-2-HEXENOL 0.2 LF JKA33:62
 CIS-3-HEXEN-1-OL 18.6 LF JKA33:62
 HEX-3-EN-1-YL-ACETATE PL BML
 HEX-CIS-3-EN-1-YL-ACETATE PL NAP
 CIS-3-HEXEN-1-OL PL BML
 IMPERATORIN 1-6 FR ABS
 IMPERATORIN 0.53 LF NAP
 INOSITOL PL HHB
 IRON 25-250 (-11,993) PL AAS CRC USA
 ISOIMPERATORIN 0-6 FR ABS
 ISOIMPERATORIN RT HHB
 ISOPIMPINELLIN 0.3-79 SH NAP
 4-ISOPROPENYL-1-METHYL-BENZENE
 27 LF JKA33:62
 4-ISOPROPENYL-1-METHYL-BENZENE
 87 SD JKA33:62
 4-ISOPROPYL-CYCLOHEX-2-ENONE
 0.42 LF JKA33:62
 JASMONIC-ACID LF NAP
 KAEMPFEROL PL PAS
 LEAD 0.08-4.0 PL AAS USG
 CIS-LIGUSTILIDE RT NAP
 LIMONENE 16 LF JKA33:62
 LIMONENE 6-1,470 SD JKA33:62 JAD
 NAP
 LINALOOL 0.12 LF JKA33:62
 LITHIUM 0.76-0.792 PL USG
 LUTEIN PL 411/
 LUTEOLIN-7-APIOSYLGLUCOSIDE SD
 AYL
 LUTEOLIN-7-DIGLUCOSIDE PL AYL
 LYSINE 2,190-18,724 PL USA
 MAGNESIUM 290-5,577 PL AAS USA 1/
 MANGANESE 2-375 PL AAS USA
 P-MENTHATRIENE 0.36 LF JKA33:62
 1,3,8-P-MENTHATRIENE 63 LF JKA33:62
 1,3,8-P-MENTHATRIENE 87 SD JKA33:62
 P-MENTHATRIENOLE 0.84-18.3 LF
 JKA33:62
 P-MENTHYL-ACETOPHENONE 3.66 LF
 JKA33:62
 P-MENTHYL-ACETOPHENONE 31 SD
 JKA33:62
 MERCURY 0.0038-0.37 PL AAS USG
 METHANOL LF NAP
 METHIONINE 150-1,282 PL CRC
 5-METHOXYPYSORALEN 0-12 FR ABS
 5-METHOXYPYSORALEN 10 LF NAP
 8-METHOXYPYSORALEN 0-5 FR ABS
 0-METHYLBENZYL-ACETATE 0.36 LF
 JKA33:62
 METHYL-DISULFIDE PL AYL
 1-METHYL-4-ISOPROPENYLBENZENE
 PL AYL
 MOLYBDENUM 0.1-14 PL AAS USG
 MUCILAGE RT HHB
 MYRCENE 18 LF JKA33:62
 MYRCENE 168-1,680 SD JKA33:62 JAD
 NAP
 MYRISTIC-ACID SD AYL
 MYRISTICIN SD GEO
 MYRISTICIN 131 LF JKA33:62
 MYRISTICIN 425-2,550 PL AYL
 MYRISTICIN (6-) 14,785-19,800 SD
 JKA33:62 JAD NAP
 MYRISTOLIC-ACID SD AYL
 NARINGENIN PL PAS
 NEOXANTHIN SH NAP
 NERAL 2.9 LF JKA33:62
 ALPHA-NEROLIDOL 0.18 LF JKA33:62
 NIACIN 5-87 PL CRC USA
 NICKEL 0.1-8.5 PL AAS USG
 NICOTINAMIDE PL PAS
 NICOTINIC-ACID SP NAP
 NICOTINIC-ACID-N-ALPHA-L-ARABI-
 NOSIDE TC NAP
 NICOTINIC-ACID-BETA-D-GLUCOSIDE
 TC NAP
 NITROGEN 4,900-40,700 LF AAS
 BIS-NORYANGONIN TC NAP
 CIS-BETA-OCIMENE PL NAP
 TRANS-BETA-OCIMENE PL AYL
 7-OCTADECANOIC-ACID SD AYL
 OLEIC-ACID 53,000 SD AYL NAP
 OSTHOLE 840-3,975 PL JAD NAP
 OXYPEUCEDANIN 7-26 FR ABS
 OXYPEUCEDANIN 100 LF NAP
 PALMITIC-ACID 5,000 SD AYL NAP
 PANTOTHENIC-ACID 3-26 PL USA
 PENTATRIACONTANE 0.18 LF
 JKA33:62
 2-PENTYL-FURAN LF NAP
 PETROSELINIC-ACID 715,000 SD AYL
 NAP
 ALPHA-PHELLANDRENE 4.3 LF
 JKA33:62
 ALPHA-PHELLANDRENE 0.6-210 SD
 JKA33:62 JAD NAP
 BETA-PHELLANDRENE 60 LF JKA33:62
 BETA-PHELLANDRENE 43-4,970 SD
 JKA33:62 JAD NAP
 PHENYLACETALDEHYDE LF NAP

PHENYLALANINE-AMMONIA-LYASE TC
 NAP
 BETA-PHENYLETHANOL SD NAP
 PHOSPHORUS 405-6,425 PL AAS CRC
 USA USG
 ALPHA-PINENE 5 LF JKA33:62
 ALPHA-PINENE 1-31,080 SD JKA33:62
 JAD NAP
 BETA-PINENE 2.4 LF JKA33:62
 BETA-PINENE 1-26,460 SD JKA33:62
 JAD NAP
 POTASSIUM 4,425-53,833 (-79,200) PL
 CRC USA 1/
 4-PROPAN-1-AL-2-YL-TOLUENE LF
 NAP
 4-PROPAN-2-OL-2-YL-TOLUENE LF
 NAP
 PROTEIN 20,000-254,096 PL AYL USA
 PROTEIN 191,000 SD CRC
 PROTOCATECHUIC-ACID ST NAP
 PSORALEN 1-10 FR ABS
 PSORALEN 2.5 LF NAP
 QUERCETIN PL PAS
 RIBOFLAVIN 2-14 PL CRC USA
 ROSMARINIC-ACID PL PAS
 RUBIDIUM 2.2-65 LF AAS
 RUTIN 30,000 LF PAS
 SABINENE 0.54 LF JKA33:62
 SABINENE 1-1,190 SD JKA33:62 JAD
 NAP
 SANTENE 1-140 SDJAD NAP
 SEDANENOLIDE SD NAP
 SELENIUM 0.001-0.021 PL AAS USG
 BETA-SELINENE 1.68 LF JKA33:62
 SENKYUNOLIDE 5 RT ABS NAP
 SESQUIPHELLANDRENE LF NAP
 SILICON 60-1,425 LF AAS
 SILVER 0.19-0.2 PL USG
 SODIUM 213-5,569 PL CRC USA USG
 STEARIC-ACID SD AYL
 STRONTIUM 285-396 PL USG
 SUCCINIC-ACID PL PAS
 SULFUR 380-4,700 PL AAS USG
 TAURINE PL PAS
 ALPHA-TERPINENE 0.24 LF JKA33:62
 GAMMA-TERPINENE 0.42 LF JKA33:62
 GAMMA-TERPINENE 3-1,120 SD
 JKA33:62 JAD NAP
 TERPINEN-4-OL 0.72 LF JKA33:62
 ALPHA-TERPINEOL 2.7 LF JKA33:62
 ALPHA-TERPINEOL 22 SD JKA33:62
 TERPINOLENE 33 LF JKA 33:62
 TERPINOLENE 6-700 SD JKA 33:62 JAD
 NAP

TETRADECANAL 3.84 LF JKA33:62
 THIAMIN 0-7 PL CRC USA
 ALPHA-THUJENE 0.1 LF JKA33:62
 ALPHA-THUJENE 4-490 SD JKA33:62
 JAD NAP
 TITANIUM 1-2 PL USG
 ALPHA-TOCOPHEROL 36-252 LF TOT
 TOLUENE LF NAP
 2-(P-TOLUYL)-PROPAN-2-OL PL 411/
 2-ALPHA-TOLYL-PROPENE LF NAP
 TRIGONELLINE TC NAP
 VIT-B6 2-14 PL CRC
 XANTHOTOXIN 3-289 SH NAP
 M-XYLENE LF NAP
 P-XYLENE LF NAP
 WATER 73,000-889,450 PL CRC USA
 ZINC 7-164 PL AAS USA USG 1/
 ZIRCONIUM 3.8-4 PL USG

1/Many of the higher numbers based on
 USDA AH8-11 OR AAS 2/JKA=J.
 KOREAN AGRIC CHEM SOC 33:62-7.
 1990 AAS=ACTA AGRIC SCAND
 SUPPL 22: 1980 H2O=86%; ZMB= 7.14
 X APB

PEUCEDANUM DECURSIVUM (MIQ.) MAX.

"QIAN HU"

ARSENIC ND PL CPB38:2205
 BARIUM 24-41 PL CPB38:2205
 BROMINE 7-23 PL CPB38:2205
 CALCIUM 14,400-30,000 PL
 CPB38:2205
 CHLORINE 3,500-4,000 PL
 CPB38:2205
 CHROMIUM 9-16 PL CPB38:2205
 COPPER 9-10 PL CPB38:2205
 IODINE ND PL CPB38:2205
 IRON 780-1,400 PL CPB38:2205
 LEAD ND PL CPB38:2205
 MANGANESE 43-69 PL CPB38:2205
 MOLYBDENUM ND PL CPB38:2205
 NICKEL ND PL CPB38:2205
 PHOSPHORUS 2,800-3,100 PL
 CPB38:2205
 POTASSIUM 16,000-29,600 PL
 CPB38:2205
 RUBIDIUM 16-18 PL CPB38:2205
 STRONTIUM 100-130 PL CPB38:2205
 SULFUR 3,700-5,200 PL CPB38:2205
 TITANIUM 66-100 PL CPB38:2205
 ZINC 23-42 PL CPB38:2205

PEUCEDANUM OSTRUTHIUM

(L.) KOCH

"MASTERWORT"

ACETIC-ACID RT HHB
 ALATOL PL JSG
 CAFFEIC-ACID RT HHB
 CHLOROGENIC-ACID RT HHB
 CNIDIN RT HHB
 DIPENTENE 480-3,360 RT HHB
 EO 2,000-14,000 RT HHB
 FORMIC-ACID EO GEO
 FORMIC-ACID-ESTER RT HHB
 HESPERIDIN RT HHB
 HYDROXYPEUCEDANIN RT GEO
 IMPERATORIN
 ISOBUTYRIC-ACID RT GEO
 ISOBUTYRIC-ACID-ESTER RT HHB
 ISOIMPERATORIN RT HHB
 ISOOXYPEUCEDANIN PL JSG
 ISOPROPYLIDENE-ACETIC-ACID RT
 GEO
 ISOVALERIANIC-ACID-ESTER RT HHB
 ISOVALERIC-ACID RT GEO
 D-LIMONENE 480-3,360 RT HHB
 TERT-O-METHOXYPEUCEDANIN-
 HYDRATE PL JSG
 OSTRHOL 1,000 ANTIMALARIAL JE15
 OSTRUTHIN 14,000 ANTIMALARIAL
 JE15
 OSTRUTHOL 3,000 RH HHB
 OXYPEUCEDANIN 13,000 RT HHB
 OXYPEUCEDANIN-HYDRATE RT HHB
 PABULENOL PL JSG
 PALMITIC-ACID
 PEUCENINE 300 RT HHB
 PEUCEDANINE
 D-PHELLANDRENE 480-3,360 RT HHB
 ALPHA-PINENE 480-3,360 RT HHB
 RESIN
 SENEIO-ACID RT HHB
 TANNIN RT HHB

PEUMUS BOLDUS MOLINA

"BOLDO"

ALKALOIDS 2,500-7,000 AYL
 ASCARIDOLE 4,000-10,000 LF AYL CRC
 HHB
 BENZALDEHYDE 1 LF CRC
 BENZYL-BENZOATE 80-100 LF CRC
 BOLDIN
 BOLDINE 600 LF AYL CRC

BOLDOGLUCIN LH HHB
 BORNYL-ACETATE 40-50 LF CRC
 CAMPHENE 120-150 LF CRC
 CAMPHOR 120-150 LF CRC
 ALPHA-3-CARENE 100-125 LF CRC
 CHOLINE LF HHB
 1,8-CINEOLE 6,000-40,000 LF CRC HHB
 COUMARIN 100-125 LF CRC
 CUMINALDEHYDE 60-75 LF CRC
 P-CYMENE 7,150 LF CRC
 P-CYMOL 6,000-7,500 LF HHB JAD
 2-DECANONE 1 LF CRC
 DIETHYL-PHTHALATE 60-75 LF CRC
 EO 20,000-25,000 LF AYL HHB
 EUGENOL LF HHB
 FARNESOL 80-100 LF CRC
 ALPHA-FENCHOL 34-43 LF CRC
 FENCHONE 160-200 LF CRC
 GUM
 2-HEPTAONE LF CRC
 ALPHA-HEXYLCINNAMALDEHYDE
 80-100 LF CRC
 ISOBOLDINE LF AYL
 ISOCORYDINE LF AYL
 ISOCORYDINE-N-OXIDE LF AYL
 BETA-ISOMETHYLIONONE
 ISORHAMNETIN-3-ALPHA-L-
 ARABINOPYRANOSIDE-7-ALPHA-L-
 RHAMNO...
 ISORHAMNETIN-3-GLUCOSIDE-7-
 RHAMNOSIDE LF HHB
 KAEMPFEROL-3-GLUCOSIDE-7-
 RHAMNOSIDE LF HHB
 LAUROLITSINE LF AYL
 LAUROTETANINE LF AYL
 LIMONENE 320-400 LF CRC
 LINALOOL 3400-4300 LF CRC
 METHYL-EUGENOL 100-125 LF CRC
 ALPHA-METHYLIONONE 80-100 LF
 CRC
 1-METHYL-4-ISOPROPENYL-BENZENE
 60-75 LF CRC
 N-METHYLLAUROTETANINE
 MYRTENAL FL CRC
 2-NONANONE 80-100 LF CRC
 NORISOCORYDINE LF AYL
 2-OCTANONE LF CRC
 PACHYCARPINE ?
 ALPHA-PINENE 800-1,000 LF CRC
 BETA-PINENE 160-200 LF CRC
 RESIN
 RETICULINE PL 411/
 RHAMNETIN-3-ARABINOSIDE-3'-
 RHAMNOSIDE LF HHB

SABINENE 160-200 LF CRC
 SPARTEINE LF CRC
 TANNIN LF AYL
 TERPINEN-4-OL 520-650 LF CRC
 GAMMA-TERPINENE 200-250 LF CRC
 ALPHA-TERPINEOL 180-225 LF CRC
 TERPINOLINE 80-100 LF CRC
 2-TRIDECANONE
 2-UNDECANONE

PHASEOLUS ACUTIFOLIUS A.
 GRAY

“TEPARY BEAN”

ASCORBIC-ACID 0 SD CRC
 ASH 68,000 FR JAD
 ASH 92,000-123,000 HA CRC JAD
 ASH 31,000-42,000 SD CRC
 CALCIUM 1,120-1,966 SD CRC EFN
 CARBOHYDRATES 436,000 FR JAD
 CARBOHYDRATES 376,000-666,000 HA
 CRC JAD
 CARBOHYDRATES 590,000-742,000 SD
 CRC JEL
 CHROMIUM 0.45-0.76 SD EFN
 COBALT 0.40-0.63 SD EFN
 COPPER 10-11 SD EFN
 CYSTEINE 2,680-2,920 SD JEL
 FAT 5,000 FR JAD
 FAT 19,000-35,000 HA CRC JAD
 FAT 4,700-15,000 SD CRC EFNJEL
 FIBER 370,000 FR JAD
 FIBER 257,000-299,000 HA CRC JAD
 FIBER 48,000-67,500 SD CRC EFN
 IRON 24-56 SD EFN
 ISOLEUCINE 12,600-13,735 SD JEL
 KILOCALORIES 3,375-3,860 SD CRC JEL
 LEUCINE 21,700-23,655 SD JEL
 LIGNIN 1,200-4,000 SD EFN
 LYSINE 17,800-19,400 SD JEL
 MAGNESIUM 1,500-1,865 SD EFN
 MANGANESE 6-12 SD EFN
 METHIONINE 2,680-2,920 SD JEL
 NIACIN 28-31 SD CRC
 OLIGOSACCHARIDE 29,500-133,100 SD
 JEL NAB
 PHOSPHORUS 2,800-4,050 SD CRC EFN
 PHENYLALANINE 11,250-12,260 SD JEL
 PHYTATE 6,150-10,200 SD JEL
 PHYTIC-ACID 6,000-10,200 SD EFN
 POTASSIUM 15,000-16,530 SD EFN
 PROTEIN 41,000 FR JAD
 PROTEIN 99,000-185,000 HA CRC JAD

PROTEIN 170,000-322,000 SD CRC JEL
 RAFFINOSE 500-9,800 SD JEL
 RIBOFLAVIN 1.2-1.3 SD CRC
 SODIUM 30-222 SD EFN
 STACHYOSE 11,000-43,600 SD JEL
 SUCROSE 18,000-79,200 SD JEL
 THIAMIN 3.3-3.6 SD CRC
 THREONINE 10,700-11,665 SD JEL
 TYROSINE 11,250-12,260 SD JEL
 VALINE 15,900-17,330 SD JEL
 WATER 80,000 FR JAD
 WATER 66,000-108,000 HA JAD
 WATER 49,800-90,100 SD EFN JAD JEL
 ZINC 25-34 SD EFN

EFN=Ecol. Food & Nutr. p. 251.1983 or
 p.135.1985 JAD=Plenum Handbook of
 Legumes, 1981

PHASEOLUS COCCINEUS L.

“SCARLET RUNNER BEAN”

ABSCISIC-ACID PL JSG
 ASCORBIC-ACID 270 FR JAD
 ASCORBIC-ACID 0-23 SD CRC
 ASH 16,000-28,000 FR JAD
 ASH 28,000-61,000 SD CRC
 CALCIUM 500-610 FR JAD
 CALCIUM 600-1,600 SD CRC EFN
 CARBOHYDRATES 298,000-463,000 FR
 JAD CRC
 CARBOHYDRATES 463,000-709,000 SD
 CRC
 BETA-CAROTENE 0.15 FR JAD
 BETA-CAROTENE 0.1 SD CRC
 CHROMIUM 0.22 SD EFN
 COBALT 0.54 SD EFN
 COPPER 0.7 SD EFN
 CYANIDIN-5-GLUCOSIDE-3-
 SOPHOSIDE PL HHB
 CYANIDIN-3-SOPHOSIDE PL HHB
 CYCLOKIEVITONE PL JSG
 DAIDZEIN PL JSG
 DEMETHYLVESTITOL PL JSG
 7,4"-DIHYDROXY-5,2'-
 DIMETHOXYISOFLAVONE PL JSG
 7BETA,13-DIHYDROXYKAURENOLIDE
 PL JSG
 ENT-6-ALPHA,7ALPHA,13-
 TRIHYDROXYKAURANOIC-ACID PL
 JSG
 ENT-6-ALPHA,7ALPHA,13-
 TRIHYDROXYKAURENOIC-ACID PL
 JSG

FAT 3,000-10,000 FR CRC
 FAT 15,000-24,000 SD CRC EFN
 FIBER 19,000-122,000 FR CRC
 FIBER 48,000-58,000 SD CRC EFN
 GENISTEIN PL JSG
 GIBERELLINENE SD HHB
 3-O-BETA-D-GLUCOPYRANOSYL-
 GIBBERELIN-A-8 PL JSG
 GLYCUOL PL JSG
 2'-HYDROXYDIHYDRODAIDZEIN PL
 JSG
 2'-HYDROXYGENISTEIN PL JSG
 2'-HYDROXYISOPRUNETIN PL JSG
 IRON 26-41 FR JAD
 IRON 1-103 SD CRC EFN
 ISOERREIRIN PL JSG
 ISOPRUNETIN PL JSG
 KIEVITONE PL JSG
 KILOCALORIES 2,500 FR CRC
 KILOCALORIES 3,280-3,860 SD CRC
 LIGNIN 9,900 SD EFN
 MAGNESIUM 1,780 SD EFN
 MANGANESE 3.2 SD EFN
 16,17-MONO-O-PROPYLIDENE-
 6ALPHA,7ALPHA,16BETA,17-
 TETRAHYDROXYKAURANIC-ACID
 NIACIN 23 FR JAD
 NIACIN 21-26 SD CRC
 PELARGONIDIN-5-GLUCOSIDE-3-
 SOPHOROSIDE PL HHB
 PELARGONIDIN-7-GLUCOSIDE-3-
 SOPHOROSIDE PL HHB
 PELARGONIDIN-3-SOPHOROSIDE PL
 HHB
 PHASEIC-ACID SD HHB
 PHASEOLLIDIN PL JSG
 PHASEOLLIN PL JSG
 PHASEOLLIN-ISOFILAVONE PL JSG
 PHASEOLUTEONE PL JSG
 PHOSPHORUS 1,600-2,770 FR CRC
 PHOSPHORUS 3,280-4,046 SD CRC
 EFN
 POTASSIUM 35,807 SD EFN
 PROTEIN 74,000-164,000 FR CRC
 PROTEIN 195,000-264,000 SD CRC EFN
 RIBOFLAVIN 1.4-1.9 FR JAD
 RIBOFLAVIN 1.1-2.2 SD CRC
 SODIUM 42 SD EFN
 THIAMIN 3.4-5.4 FR JAD
 THIAMIN 3-3.5 SD CRC
 WATER 342,000-583,000 FR CRC
 WATER 64,200-136,000 SD CRC EFN
 ZINC 2 SD EFN

EFN=Ecol. Food & Nutr. p.135.1985 JAD=
 Plenum's Handbook of Legumes. 1981

PHASEOLUS LUNATUS L.

"LIMA BEAN; BUTTER BEAN"

ALANINE 2,600-12,190 SD USA
 ALUMINUM 0.44-3,000 SD USG
 AMYGDALIN SD HHB
 ARGININE 4,580-15,390 SD USA
 ASCORBIC-ACID 0-952 SD CRC USA
 ASCORBIC-ACID 70-194 SP CRC
 ASH 40,000 FR CRC
 ASH 5,000-179,000 LF CRC
 ASH 15,000-100,000 SD CRC USG
 ASH 22,000-61,000 SP CRC
 ASPARTIC-ACID 7,350-30,802 SD USA
 BARIUM 1-30 SD USG
 BORON 1-30 SD BOB USG
 CALCIUM 80-2,857 LF CRC
 CALCIUM 250-8,600 SD CRC USG
 CALCIUM 1,090-3,028 SP CRC
 CARBOHYDRATES 766,000 FR CRC
 CARBOHYDRATES 17,000-674,000 LF
 CRC
 CARBOHYDRATES 201,000-731,000 SD
 CRC USA
 CARBOHYDRATES 200,000-556,000
 SP CRC
 BETA-CAROTENE 0-9.8 SD USA
 BETA-CAROTENE 0.3-0.8 SP CRC
 CHROMIUM 0-5 SD USG
 COBALT 0-1 SD USG
 COPPER 3-15 SD USG
 CYSTINE 830-2,789 SD USA
 FAT 6,000 FR CRC
 FAT 0-48,000 LF CRC
 FAT 1,000-28,898 SD CRC USA
 FAT 2,900-22,000 SP CRC EFN
 FIBER 175,000 FR CRC
 FIBER 111,000 LF CRC
 FIBER 10,000-84,500 SD CRC EFN USA
 FIBER 6,000-17,000 SP CRC
 GLUTAMIC-ACID 8,810-33,820 SD USA
 GLUTAMYL-5-METHYLCYSTEINE PL
 HHB
 GLYCINE 2,740-10,090 SD USA
 HISTIDINE 2,320-7,796 SD USA
 IRON 23-821 LF CRC
 IRON 22-1,000 SD CRC USG
 IRON 13-228 SP CRC EFN
 ISOLEUCINE 4,400-14,785 SD USA
 KILOCALORIES 80-2,860 LF CRC

KILOCALORIES 1,130-3,840 SD CRC
 USA
 KILOCALORIES 100-3,060 SP CRC
 LEAD 0.4-5 SD USG
 LEUCINE 5,380-20,595 SD USA
 LIGNIN 3,400-6,400 SD EFN
 LINOLEIC-ACID 2,150-9,509 SD USA
 ALPHA-LINOLEIC-ACID 950-4,570 SD
 USA
 LYSINE 4,520-19,010 SD USA
 MAGNESIUM 580-7,000 SD USG USA
 MANGANESE 8-100 SD USG
 METHIONINE 680-3,017 SD USA
 S-METHYLCYSTEINE PL HHB
 MOLYBDENUM 0-15 SD USG
 MUFA 500-1,680 SD USA
 MYRISTIC-ACID 20-67 SD USA
 NIACIN 10-49.5 SD CRC USA
 NIACIN 8-56 SP CRC PAN
 NICKEL 0.3-7 SD USG
 OLEIC-ACID 500-1,680 SD USA
 PALMITIC-ACID 1,180-5,813 SD USA
 PANTOTHENIC-ACID 2.3-16 SD USA
 PHASEOLUNATIN SD HHB
 PHENYLALANINE 3,370-13,760 SD
 USA
 PHOSPHORUS 360 LF CRC
 PHOSPHORUS 1,130-9,000 SD CRC USG
 PHOSPHORUS 3,820-10,611 SP CRC
 POTASSIUM 2,950-39,000 SD CRC USG
 PROLINE 1,020-10,855 SD USA
 PROTEIN 188,000 FR CRC
 PROTEIN 6,000-214,000 LF CRC
 PROTEIN 68,400-287,000 SD CRC USA
 PROTEIN 130,000-361,000 SP CRC
 PUFA 3,090-14,079 SD USA
 RIBOFLAVIN 0.3-5.1 SD CRC PAN
 RIBOFLAVIN 1.4-3.9 SP CRC
 SERINE 4,270-15,900 SD USA
 SFA 1,620-6,653 SD USA
 SODIUM 5-269 SD CRC EFN USA
 STEARIC-ACID 220-739 SD USA
 STRONTIUM 1-100 SD USG
 THIAMIN 1.6-7.4 SD CRC
 THIAMIN 0.1-4.7 SP CRC PAN
 THREONINE 2,900-10,320 SD USA
 TITANIUM 0-20 SD USG
 TRYPTOPHAN 900-3,024 SD USA
 TYROSINE 2,200-8,450 SD USA
 VALINE 4,270-14,370 SD USA
 VANADIUM 0.22-3 SD USG
 VIT-B6 2-7.2 SD USA
 WATER 972,000 LF CRC

WATER 46,900-702,400 SD CRC EFN
 USA
 WATER 640,000 SP CRC
 ZINC 7-100 SD USG USA
 ZIRCONIUM 0.9 7 SD USG

1/ USG= U. S. Geol. Survey EFN=Ecol.
 Food & Nutr. 1985

PHASEOLUS VULGARIS L.

"GREENBEAN; BLACKBEAN;
 HARICOT"

ALANINE 840-8,633 FR USA
 ALANINE 9,050-10,171 SD USA
 ALANINE 1,740-18,710 SP USA
 ALLANTOIC-ACID FR HHB
 ALUMINUM 5-73 SD USG
 ALUMINUM 1-1,050 FR AAS USG
 APIGENIN? PL JLS58:133
 ARGININE 730-7,503 FR USA
 ARGININE 13,370-15,026 SD USA
 ARGININE 2,280-24,516 SP USA
 ARSENIC 0.0017-0.00245 SD USG
 ARSENIC 0.0027-0.01 FR USG
 ASCORBIC-ACID 10-2,389 FR CRC HHB
 USA
 ASCORBIC-ACID 1,100-8,333 LF CRC
 ASCORBIC-ACID 0-177 SD CRC USA
 ASCORBIC-ACID 387-4,161 SP USA
 ASH 6,000-156,000 FR CRC USG
 ASH 26,000-177,000 LF CRC
 ASH 17,000-62,000 SD CRC USG
 ASH 5,000-53,763 SP USA
 ASPARAGINE FR HHB
 ASPARTIC-ACID 2,550-26,208 FR USA
 ASPARTIC-ACID 26,130-29,366 SD USA
 ASPARTIC-ACID 5,460-58,710 SP USA
 BARIUM 0.1-7.3 SD USG
 BARIUM 0.4-45 FR USG
 BIOTIN RT HHB
 BORON 2-43 SD BOB USG
 BORON 0.1-45 FR AAS BOB USG
 BROMINE 2-20 FR AAS
 CADMIUM 0.0068-0.039 SD USG
 CADMIUM 0.002-0.2 FR AAS USG
 CALCIUM 2,740-20,758 LF CRC
 CALCIUM 356-18,000 FR USA USG
 WOI
 CALCIUM 510-3,295 SD EFN USA
 CALCIUM 170-1,828 SP USA
 CARBOHYDRATES 56,000-733,778 FR
 CRC USA

- CARBOHYDRATES 66,000-500,000 LF CRC
 CARBOHYDRATES 278,000-701,039 SD CRC
 CARBOHYDRATES 41,000-440,860 SP USA
 BETA-CAROTENE 2.2-66 FR CRC
 BETA-CAROTENE 32.4-245.5 LF CRC
 BETA-CAROTENE 0.1-9.8 SD CRC
 BETA-CAROTENE 0 SP USA
 CEREBROSIDE FR HHB
 CHOLINE FR HHB
 CHROMIUM 0.051-4.9 SD USG
 CHROMIUM 0.005-1.5 FR AAS USG
 COBALAMINE RT HHB
 COBALT 0.034-1.05 SD EFN USG
 COBALT 0-10.5 FR AAS USG
 COPPER 2-15 SD USG
 COPPER 0.62-45 FR AAS USG USA
 P-COUMARIC-ACID PL JLS58:133
 CYSTINE 180-1,850 FR USA
 CYSTINE 2,350-2,641 SD USA
 CYSTINE 480-5,161 SP USA
 DEC-2-EN HU HHB
 12-DICARBONIC-ACID HU HHB
 17-BETA-ESTRADIOL FL HHB
 ESTROL FL HHB
 ESTRONE FL HHB
 FAT 2,000-47,000 FR CRC
 FAT 4,000-54,000 LF CRC
 FAT 3,000-24,000 SD CRC
 FAT 5,000-53,763 SP USA
 FERRITINE FL HHB
 FERULIC-ACID PL JLS58:133
 FIBER 10,000-159,000 FR CRC
 FIBER 28,000-212,000 LF CRC
 FIBER 37,000-88,700 SD CRC EFN USA
 FLUORINE 0.1-2 FR AAS
 FOLACIN 4.1-5.3 SD USA
 FOLACIN 0.3-4.1 SP USA
 GIBBERELIN-A-37 PL JSG
 GIBBERELIN-A-38 PL JSG
 GLUCOKININ FR HHB
 GLUTAMIC-ACID 1,870-19,219 FR USA
 GLUTAMIC-ACID 32,940-37,019 SD USA
 GLUTAMIC-ACID 5,120-55,054 SP USA
 GLUTATHIONE RT HHB
 GLYCINE 650-6,680 FR USA
 GLYCINE 8,430-9,474 SD USA
 GLYCINE 1,440-15,484 SP USA
 HISTIDINE 340-3,494 FR USA
 HISTIDINE 6,010-6,754 SD USA
 HISTIDINE 1,180-12,688 SP USA
 INOSITOL FR HHB
 IRON 6-1,050 FR AAS CRC USG
 IRON 92-697 LF CRC
 IRON 24-147 SD USG
 IRON 8-87 SP USA
 ISOLEUCINE 660-6,783 FR USA
 Isoleucine 9,540-10,722 SD USA
 Isoleucine 1,860-20,000 SP USA
 KAEMPFEROL-3-GLUCURONIDE LF HHB
 KILOCALORIES 280-3,830 FR CRC
 KILOCALORIES 360-2,730 LF CRC
 KILOCALORIES 3,230-3,832 SD CRC
 KILOCALORIES 290-3,118 SP USA
 LEAD 0.7-1 SD USG
 LEAD 0.01-10.5 FR AAS USG
 LEUCINE 1,120-11,511 FR USA
 LEUCINE 17,250-19,386 SD USA
 LEUCINE 3,020-32,473 SP USA
 LIGNIN 4,100-10,800 SD EFN
 LINOLEIC-ACID 230-2,364 FR USA
 LINOLEIC-ACID 3,320-3,731 SD USA
 LINOLEIC-ACID 1,070-11,505 SP USA
 ALPHA-LINOLENIC-ACID 360-3,700 FR USA
 ALPHA-LINOLENIC-ACID 2,780-3,124 SD USA
 ALPHA-LINOLENIC-ACID 1,690-18,172 SP USA
 LITHIUM 0.136-2.45 SD USG
 LITHIUM 0.216-2.7 FR USG
 LUTEOLIN? PL JLS58:133
 LYSINE 880-9,044 FR USA
 LYSINE 14,830-16,667 SD USA
 LYSINE 2,390-25,700 SP USA
 MAGNESIUM 210-18,000 FR AAS USA USG
 MAGNESIUM 510-3,430 SD USG
 MAGNESIUM 210-2,258 SP USA
 MALONIC-ACID FR HHB
 MANGANESE 1-150 FR AAS USG USA
 MANGANESE 2-24 SD USG
 MERCURY 0.0004-0.02 FR AAS
 METHIONINE 220-2,261 FR USA
 METHIONINE 3,250-3,653 SD USA
 METHIONINE 440-4,731 SP USA
 2-METHOXYPHASEOLINISOFLAVAN SP HHB
 MOLYBDENUM 0.5-14 SD USG
 MOLYBDENUM 0-20 FR USG
 MUFA 50-514 FR USA
 MUFA 1,230-1,382 SD USA
 MUFA 390-4,194 SP USA
 NIACIN 5-77 FR CRC USA
 NIACIN 13-98 LF CRC

NIACIN 15-38 SD CRC
 NIACIN 29-312 SP USA
 NICKEL 0.5-7 SD USG
 NICKEL 0-15 FR USG
 NITROGEN 3,600-41,000 FR AAS
 OLEIC-ACID 40-411 FR USA
 OLEIC-ACID 1,230-1,382 SD USA
 OLEIC-ACID 390-4,194 SP USA
 OXALIC-ACID 312 FR WBB
 PALMITIC-ACID 220-2,261 FR USA
 PALMITIC-ACID 3,430-3,855 SD USA
 PALMITIC-ACID 640-6,882 SP USA
 PANTOTHENIC-ACID 0.9-10 FR USA
 PANTOTHENIC-ACID 9-10 SD USA
 PHASELIC-ACID PL JSG
 PHASEOLIDES PL JSG
 PHASEOLLIDIN PL JSG
 PHASEOLLIN PL JSG
 PHASEOLLIN-ISOFALVONE PL JSG
 PHENYLALANINE 670-6,886 FR USA
 PHENYLALANINE 11,680-13,127 SD USA
 PHENYLALANINE 2,120-22,796 SP USA
 PHOSPHORUS 370-13,500 FR AAS CRC
 USG USA
 PHOSPHORUS 750-5,682 LF CRC
 PHOSPHORUS 2,130-5,880 SD CRC USG
 PHOSPHORUS 370-3,978 SP USA
 PHYTIC-ACID 4,800 SD EFN
 PHYTOSTEROLS SD HHB
 PIPECOLIC-ACID FR USA
 POTASSIUM 1,960-58,500 FR CRC
 POTASSIUM 9,840-21,070 SD CRC USG
 POTASSIUM 1,870-20,108 SP USA
 PROLINE 680-6,989 FR USA
 PROLINE 9,160-10,294 SD USA
 PROLINE 1,690-18,172 SP USA
 PROTEIN 17,700-224,000 FR CRC USA
 PROTEIN 36,000-297,000 LF CRC
 PROTEIN 98,000-394,000 SD CRC PAN
 PROTEIN 42,000-451,613 SP USA
 PUFA 590-6,064 FR USA
 PUFA 6,100-6,855 SD USA
 PUFA 2,760-29,677 SP USA
 PYRROLIDINONCARBONIC-ACID
 FR HHB
 QUERCETIN-3-GLUCURONIDE LF
 HHB
 RIBOFLAVIN 1-12 FR CRC
 RIBOFLAVIN 0.6-4.5 LF CRC
 RIBOFLAVIN 1.2-3.0 SD CRC
 RIBOFLAVIN 2.5-27 SP USA
 RUBIDIUM 0.47-7 FR AAS
 SELENIUM 0.00034-0.0098 SD USG
 SELENIUM 0.00108-0.008 FR USG
 SERINE 990-10,175 FR USA
 SERINE 11,750-13,205 SD USA
 SERINE 2,240-24,086 SP USA
 SFA 260-2,672 FR USA
 SFA 3,660-4,113 SD USA
 SFA 720-7,742 SP USA
 SILICON 80-1,200 FR AAS
 SILVER 0.034-0.147 SD USG
 SILVER 0-0.3 FR USG
 SODIUM 5.4-707 FR CRC
 SODIUM 0.85-112 SD CRC USG
 STEARIC-ACID 40-411 FR USA
 STEARIC-ACID 220-247 SD USA
 STEARIC-ACID 90-968 SP USA
 STRONTIUM 0.7-34 SD USG
 STRONTIUM 2-105 FR USG
 SUCCINIC-ACID FR HHB
 SULFUR 54-137 SD USG
 SULFUR 54-875 FR AAS USG
 THIAMIN 0.5-8.8 FR CRC USA
 THIAMIN 1.8-13.6 LF CRC
 THIAMIN 3.7-10 SD CRC
 THIAMIN 3.7-40 SP USA
 THREONINE 790-8,119 FR USA
 THREONINE 9,090-10,216 SD USA
 THREONINE 1,760-18,925 SP USA
 TITANIUM 0.17-7.4 SD USG
 TITANIUM 0.1-105 FR USG
 ALPHA-TOCOPHEROL 0.2-14 FR TOT
 USA
 ALPHA-TOCOPHEROL 698-719 LF CCG
 TRAUMATINIC-ACID HU HHB
 TRIGONELLINE FR HHB
 TRYPTOPHAN 190-1,953 FR USA
 TRYPTOPHAN 2,560-2,877 SD USA
 TRYPTOPHAN 440-4,731 SP USA
 TYROSINE 420-4,317 FR USA
 TYROSINE 6,080-6,833 SD USA
 TYROSINE 1,440-15,484 SP USA
 VALINE 900-9,250 FR USA
 VALINE 11,300-12,699 SD USA
 VALINE 2,160-23,226 SP USA
 VANADIUM 0.24-105 FR USG
 VIT-B6 0.74-7.6 FR USA
 VIT-B6 2.8-3.3 SD USA
 WATER 63,000-604,000 SD CRC PAN
 USG
 WATER 868,000 LF CRC
 WATER 688,000-942,000 FR USG
 WATER 907,000 SP USA
 ZINC 19-50 SD USG
 ZINC 2-150 FR USG USA
 ZIRCONIUM 0.68-1.47 SD USG
 ZIRCONIUM 1-22 FR USG

EFN=Ecol. Food & Nutr. 1983 & 1985
 AAS=ACTA AGRIC SCAND SUPPL
 22:1980; H2O=90%;
 ZMP=10 X APB

PHELLODENDRON AMURENSE

Rupr.

“HUANG PO; PO MU”

AMURENSINE 400-10,000 LF CCO
 HHB
 BERBERINE 8,300-10,000 BK CCO
 HHB
 CALCIUM 14,100 BK SMO
 CAMPESTEROL BK CCO
 CANDICINE BK CCO
 COPPER 6 BK SMO
 7-DEHYDROSTIGMASTEROL BK
 CCO
 DIHYDROPHELLOSIDE FR HHB
 EO FR HHB
 FAT 517,000 CRC
 FLAVONOIDS 100,000 FR HHB
 GUANIDINE BK CCO HHB
 HYPERIN FR HHB
 IRON 210 BK SMO
 JATRORRHIZINE BL CCO
 LIMONIN PL JSG
 MAGNESIUM 650 BK SMO
 MAGNOFLORINE BK CCO
 MANGANESE 20 BK SMO
 MENISPERINE BK CCO
 METHYL-N-HEPTYLKETONE FR
 CCO
 METHYL-N-NONYLKETONE FR HHB
 MYRCENE FR HHB
 NOR-ICARISID(8-(3-BETA-GLUCOSIDE-
 OXYISOPENTYL)-KAEMPFEROL
 OBACULACTONE BK CCO
 OBACUNONE BK CCO
 PALMATINE BK CCO
 PHELLAMURETIN LF CCO
 PHELLAMURINE LF HHB
 PHELLATINE LF HHB
 PHELLAVINE LF HHB
 PHELLODENDROSIDE HHB
 PHELLODENDRINE BK CCO
 PHELLOSIDE FR HHB
 POTASSIUM 4,370 BK SMO
 PROTEIN 358,000 SD CRC
 BETA-SITOSTEROL BK CCO
 SODIUM 55 BK SMO
 ZINC 26 BK SMO

PHOENIX DACTYLIFERA L.

“DATE PALM”

ACETALDEHYDE FR JAD
 ALANINE 80-1,290 FR ABS USA
 ALUMINUM 51 FR JAD
 ALUMINUM 3-13 SD ABS
 GAMMA-AMINO-BUTYRIC-ACID 2,660-
 3,370 FR ABS
 BETA-AMYRIN PO ABS
 APIGENIN ST RAA
 ARABINOSE FR WOI
 ARACHIDIC-ACID SD ABS
 ARGININE 620-2,090 FR ABSUSA
 ASCORBIC-ACID 0-750 FR CRC USA
 ASPARAGINE 2,300-4,500 FR ABS
 ASPARTIC-ACID 20-3,150 FR ABS USA
 ASH 15,600-44,800 FR ABS CRC USA
 ASH 9,000-18,000 SD CRC
 BAIKIAIN FR HHB
 BEHENIC-ACID SD ABS
 BENZOIC-ACID ST RAA
 BORON 7 FR BOB
 BRASSICASTEROL SD ABS
 CADMIUM 0-9 SD ABS
 3—CAFFEYOYLSHIKIMIC-ACID FR RAA
 CALCIUM 140-2,000 FR ABS CRC USA
 CALCIUM 18-436 SD ABS
 CAMPEST-4-EN-3,6-DIONE ST RAA
 CAMPEST-4-EN-3-ONE ST ABS
 CAMPESTAN-4-EN-3-ONE ST ABS
 5ALPHA-CAMPESTERAN-3,6-DIONE ST
 RAA
 CAMPESTEROL ST ABS
 CAPRIC-ACID SD WOI
 CAPRYLIC-ACID SD WOI
 CARBOHYDRATES 735,100-948,500 FR
 USA
 CARBOHYDRATES 655,000-853,000 SD
 CRC WOI
 BETA-CAROTENE 1-3.6 FR CRC USA
 CHLORIDE 1,610 SD ABS
 CHLORINE 270-310 FR JAD
 CHLOROGENIC-ACID FR ABS
 CHLOROPHYLL 0-410 FR JAD
 CHOLESTEROL 0- FR USA
 COPPER 2-4 FR USA WOI
 COPPER 0.6-2 SD ABS
 COUMARIN LF JFM
 CYSTEINE 110-1,140 FR ABS
 CYSTINE 7-580 FR ABS USA
 DACTYLIFRIC-ACID FR ABS

DEHYDRO-BETA-CAROTENE FR RAA
 3,5-DIHYDROXY-4-
 METHOXYBENZALDEHYDE ST RAA
 3,5-DIHYDROXY-4-METHOXY-BEN-
 ZOIC-ACID ST ABS
 2,3-DI-O-METHYLXYLOSE FR JAD
 ELLAGITANNIN 0-9,900 PL RAA
 ERGOSTEROL SD WOI
 ESTROGEN SD ABS
 ESTRONE SD WOI
 FAT 1,000-25,000 FR CRC USA
 FAT 68,000-100,000 SD CRC HHB WOI
 FIBER 22,000-83,000 FR CRC USA
 FIBER 136,000-300,000 SD CRC WOI
 FLAVOXANTHIN FR RAA
 FOLACIN 0.08-0.17 FR USA
 FRUCTOSE 308,000 FR RAA
 FRUCTOSE 15,300 SD ABS
 GALACTOSE FR WOI
 GALACTURONIC-ACID FR WOI
 GALLOTANNIN 4,300-27,800 PL RAA
 GLUCOSE 357,000 FR RAA
 GLUCOSE 16,800 SD ABS
 7BETA-GLUCOSYL-CHRYSOERIOL ST
 RAA
 GLUTAMIC-ACID 400-6,160 FR ABS
 USA
 GLUTAMINE 650-870 FR ABS WOI
 GLYCINE 40-3,010 FR ABS USA
 GLYCOSYLAPIGENIN LF RAA
 HENEICOSANOIC-ACID SD ABS
 HISTIDINE 10-396 FR ABS USA
 P-HYDROXYBENZALDEHYDE ST RAA
 P-HYDROXYBENZOIC-ACID ST RAA
 6BETA-HYDROXYCAMPEST-4-ENE-3-
 ONE ST RAA
 4-HYDROXY-3-
 METHOXYBENZALDEHYDE ST RAA
 4-HYDROXY-3-METHOXYCINNAMIC-
 ACID ST RAA
 6BETA-HYDROXYSTIGMAST-4-EN-3-
 ONE ST RAA
 6BETA-HYDROXYSTIGMAST-4,22-
 DIEN-3-ONE ST RAA
 INVERTASE FR WOI
 IODINE 0.06 FR WOI
 IRON 10-151 FR CRC USA
 IRON 5-17 SD ABS
 ISOCHLOROGENIC-ACID FR ABS
 ISOFUCOSTEROL FR ABS
 ISOLEUCINE 20-4,650 FR ABS USA
 KILOCALORIES 2,750-3,550 FR USA
 LACTOSE SD ABS
 LAURIC-ACID 5,600-54,000 SD ABS WOI
 LEAD 0.1-4 SD ABS
 LEUCINE 5-1,140 FR ABS USA
 LEUCOANTHOCYANIN FR HHB
 LINOLEIC-ACID 7,000-8,000 SD ABS
 WOI
 LINONELIC-ACID SD ABS
 LUPEOL ST RAA
 LUPYL-ACETATE ST ABS
 LUTEIN FR RAA
 LUTEOLIN-7-GLYCOSIDE LF RAA
 LUTEOLIN-7-RUTINOSIDE LF RAA
 LYCOPENE FR RAA
 LYSINE 30-2,450 FR ABS USA
 MAGNESIUM 325-790 FR JAD USA WOI
 MALTOSE SD ABS
 MANGANESE 3-45 FR JAD USA
 MANGANESE 16 SD ABS
 D-MANNOSE SD ABS
 MARGARIC-ACID SD ABS
 METHIONINE 5-2,190 FR ABS USA
 2-O-METHYLXYLOSE FR JAD
 MYRISTIC-ACID 2,800-23,000 SD ABS
 WOI
 NIACIN 10-135 FR CRC USA
 OLEIC-ACID 31,500-51,000 SD ABS WOI
 OXALIC-ACID SD WOI
 5-OXYPIPECOLIC-ACID FR HHB
 PALMITIC-ACID 17,000-17,500 SD ABS
 WOI
 PALMITOLEIC-ACID SD ABS
 PANTOTHENIC-ACID 8-10 FR USA
 PECTINS 7,200-39,000 FR ABS WOI
 PENTOSANS 38,800 FR ABS
 PENTOSANS 43,600 SD ABS
 PEROXIDASE FR WOI
 PHENYLALANINE 8-740 FR ABS USA
 PHOSPHORUS 370-8,795 FR CRC USA
 PHOSPHORUS 1,120 SD ABS
 PIPECOLIC-ACID FR HHB
 POLYPHENOLS 30,000 FR WOI
 POTASSIUM 6,250-8,780 FR USA
 POTASSIUM 28-2,440 SD ABS
 PROLINE 120-1,590 FR ABS USA
 PROTEIN 19,000-43,000 FR ABS USA
 PROTEIN 52,000-58,000 SD CRC WOI
 QUERCETIN PO ABS
 RAFFINOSE 3,000 SD ABS
 RHAMNOSE FR WOI
 RIBOFLAVIN 0.2-1.3 FR CRC USA
 RIBOSE FR WOI
 RUTIN PO ABS
 SERINE 60-1,960 FR ABS USA

SEROTONIN 8-9 FR JAD
 SILICON 660 FR JAD
 BETA-SITOSTEROL PO ABS
 SODIUM 10-380 FR ABS CRC JAD USA
 SODIUM 15-820 SD ABS
 SORBITOL FR WOI
 STACHYOSE 2,200 SD ABS
 STARCH 206,000 FR ABS
 STEARIC-ACID 3,000-7,000 SD ABS WOI
 STIGMAST-4-ENE-3,6-DIONE ST RAA
 STIGMAST-4,22-DIENE-3,6-DIONE ST RAA
 5-ALPHA-STIGMAST-22-ENE-3,6-DIONE ST RAA
 5-ALPHA-STIGMASTAN-3,6-DIONE ST RAA
 STIGMAST-4-ENE-3-ONE ST ABS
 STIGMASTEROL FR ABS
 SUCROSE 0-400,000 FR ABS WOI
 SUCROSE 38,200 SD ABS
 SUGARS 380,000-850,000 FR ABS HHB WOI
 SULFUR 510-590 FR JAD WOI
 TANNIN 200-18,000 FR WOI
 TANNINS 7,500-44,800 PL RAA
 CIS-3,5,3',5'-TETRAHYDROXY-4-METHYLSTILBENE ST RAA
 TRANS-3,5,3',5'-TETRAHYDROXY-4-METHYLSTILBENE ST RAA
 THIAMIN 0.1-1.7 FR CRC USA
 THREONINE 10-980 FR ABS USA
 TRICOSANOIC-ACID SD ABS
 3,5,4'-TRIHYDROXYSTILBENE ST ABS
 2,3,4-TRI-O-METHYLXYLOSE FR JAD
 TRYPTOPHAN 500-645 FR USA
 TYROSINE 10-1,730 FR ABS USA
 URONIC-ACID PO HHB
 VALINE 5-2,710 FR ABS USA
 VIOLAXANTHIN FR RAA
 VIT-B6 2-3 FR USA
 WATER 153,000-225,000 FR USA WOI
 WATER 79,000 SD WOI
 WAX FR WOI
 XYLOSE FR WOI
 ZINC 3-4 FR USA
 ZINC 0.6-29 SD ABS

ABS=Fayadh and Al-Showiman, 1990.J. Chem. Soc. Pak 12(1);84-103. Some high values, e.g. lauric acid, derived by multiplying ABS percentages by high fat percentages in seed, e.g., seeds reported up to 10% fat in HHB, multiplied by ABS 54% lauric-acid=54,000

PHORADENDRON SEROTINUM
 (RAF.) M. C. JOHNSTON

“EASTERN MISTLETOE”

ASH 59,000 LF CRC
 CARBOHYDRATES 467,000 LF CRC
 FAT 56,000 LF CRC
 FIBER 188,000 LF CRC
 BETA-PHENYLETHYLAMINE PL CRC
 PHORATOXIN PL CRC
 PROTEIN 220,000 LF CRC
 TYRAMINE PL CRC

PHYLLANTHUS ACIDUS (L.)
 SKEELS

“INDIAN GOOSEBERRY”
 “OTAHEITE GOOSEBERRY”

ASCORBIC-ACID 20-1,279 FR CRC
 ASH 4,000-70,000 FR CRC
 CALCIUM 60-2,326 FR CRC
 CARBOHYDRATES 52,000-832,000 FR CRC
 BETA-CAROTENE 0-8 FR CRC
 FAT 4,000-209,000 FR CRC
 FIBER 13,000-244,000 FR CRC
 IRON 11-372 FR CRC
 KILOCALORIES 340-4,300 FR CRC
 NIACIN 4-58 FR CRC
 PHOSPHORUS 200-2,442 FR CRC
 POTASSIUM 1,510-15,895 FR CRC
 PROTEIN 8,000-116,000 FR CRC
 RIBOFLAVIN 0.1-2 FR CRC
 SODIUM 60-632 FR CRC
 THIAMIN 0.1-6 FR CRC
 WATER 905,000-914,000 FR CRC

PHYLLANTHUS EMBLICA L.

“EMBLIC”
 “MYROBALAN”

ALANINE 240-1,190 FR SHA47:103
 AMLAIC-ACID LF HHB
 ARGININE 176-871 FR SHA47:103
 ASCORBIC-ACID 2,760-27,293 FR CRC
 ASH 4,000-25,000 FR CRC
 ASPARTIC-ACID 361-1,785 FR SHA47:103
 BORON 2-11 FR SHA47:102
 CALCIUM 120-2,660 FR CRC WOIO
 CARBOHYDRATES 141,000-952,000 FR CRC

BETA-CAROTENE 0-4 FR CRC
 CHEBULAGINIC-ACID FR HHB
 CHEBULIC-ACID FR HHB
 CHEBULININIC-ACID FR HHB
 CHLORIDE 355-1,757 FR SHA47:102
 COPPER 3-14 FR SHA47:102
 CORILAGIC-ACID FR HHB
 CYSTINE 0 FR SHA47:103
 ELLAGIC-ACID FR HHB
 FAT 1,000-31,000 FR CRC
 FAT 160,000 SD WOI
 FIBER 19,000-180,000 FR CRC WOI
 GALLIC-ACID 50,000 FR HHB
 GALLOTANNIN LF HHB
 GLUCOSE FR CRC
 GLUTAMIC-ACID 1,320-6,535 FR
 SHA47:103
 GLYCINE 198-980 FR SHA47:103
 HISTIDINE 133-658 FR SHA47:103
 IRON 5-163 FR CRC SHA47:102
 ISOLEUCINE 120-595 FR SHA47:103
 KAEMPFEROL LF HHB
 KAEMPFEROL-3-GLUCOSIDE LF HHB
 KILOCALORIES 580-3,650 FR CRC
 LEUCINE 219-1,084 FR SHA47:103
 LEUCODELPHINIDIN BK HHB
 LINOLEIC-ACID 70,400 SD WOI
 LINOLENIC-ACID 14,050 SD WOI
 LUPENONE PL CCO
 LUPEOL BK HHB
 LYSINE 170-1,168 FR JFM SHA47:103
 MAGNESIUM 118-584 FRSHA47:102
 MANGANESE 11-55 FRSHA47:102
 METHIONINE 20-355 FR JFM SHA47:103
 MYRISTIC-ACID 1,520 FR WOI
 NIACIN 2-12 FR CRC
 NITROGEN 1,100-5,445 FR SHA47:101
 OLEIC-ACID 45,440 SD WOI
 PALMITIC-ACID 4,785 SD WOI
 PECTIN FR HHB
 PHENYLALANINE 133-658 FR
 SHA47:103
 PHOSPHORUS 200-1,390 FR CRC
 SHA47:102
 PHYLLEMBLINIC-ACID 40,000-90,000
 FR HHB
 POTASSIUM 1,710-13,960 FR CRC
 SHA47:102
 PROLINE 652-3,225 FR SHA47:103
 PROTEIN 4,000-44,000 FR CRC
 RIBOFLAVIN 0.4-2.5 FR CRC
 SELENIUM 2.4-12 FR SHA47:102
 SERINE 183-905 FR SHA47:103
 SILICA 235-1,163 FR SHA47:102

BETA-SITOSTEROL BK HHB
 SODIUM 42-1,384 FR CRC SHA47:102
 STARCH 1,800-8,910 FR SHA47:99
 STEARIC-ACID 3,440 SD WOI
 SUCROSE 2,600-12,970 FR SHA47:99
 SULFUR 166-820 FRSHA47:102
 TANNIN 80,000-21,000 BK HHB WOI
 TANNIN 180,000-22,000 LF HHB WOI
 TANNIN 280,000 FR WOI
 TERCHEBIN FR HHB
 THIAMIN 0.3-1.9 FR CRC
 THREONINE 135-668 FR SHA47:103
 TRIGALLOYL-GLUCOSE FR HHB
 TRYPTOPHAN 30-131 FR JFM
 TYROSINE 116-575 FR SHA47:103
 VALINE 159-785 FR SHA47:103
 WATER 771,000-841,000 FR CRC
 ZINC 18-89 FRSHA47:102

PHYLLANTHUS NIRURI L.

"SEED ON THE LEAF"

BREVIFOLIN-CARBOXYLIC-ACID PL
 CPB37:2531
 HYPOPHYLLANTHINE PL HHB
 LINTETRALIN PL MPI
 LUPA-20(29)-ENE-3-BETA-OL RT MPI
 LUPA-20(29)-ENE-3-BETA-OL-ACETATE
 RT MPI
 4-METHOXY-NORSECURININE PL MPI
 4-METHOXY-SECURININE PL MPI
 NIRANTHIN LF MPI
 NIRTETRALIN LF MPI
 PHYLLANTHIN LF MPI
 PHYLTETRALIN LF MPI
 QUERCETIN PL JFM
 QUERCETIN-HETEROSIDE PL HHB
 QUERCITRIN PL CPB37:2531
 3,5,7-TRIHYDROXYFLAVONAL-4'-O-
 ALPHA-L-(-)-RHAMNOPYRANOSIDE
 RT MPI
 5,3',4'-TRIHYDROXYFLAVONONE-7-O-
 ALPHA-L-(-)-RHAMNOPYRANOSIDE
 RT MPI

Hopelessly confused with *P. amarus* and *P.*
fraternus

PHYSALIS ALKEKINGI L.

"BLADDERHERB"

"LANTERN"

ASCORBIC-ACID 4,000 FR HHB
 ASH 5,000 FR HHB

CRYPTOXANTHIN FL HHB
CUSCOHYGRINE RT 411/
FAT 110,000 SD HHB
LUTEOLIN PL HHB
LUTEOLIN-7-BETA-D-GLUCOSIDE PL
HBH
MUCILAGE PL HHB
NEO-BETA-CRYPTOXANTHIN PL HHB
PECTIN 7,000 FR HHB
PHYSALIEN FR HHB
PHYSALIN-A 500 PL HHB
PHYSALIN-B 50 PL HHB
PHYSALIN-C PL HHB
PHYSOXANTHIN PL HHB
PSEUDOTROPINE RT CCO
RESIN 2,000 FR HHB
SUGARS 20,000 FR HHB
TANNINS 110,000 RT HHB
TIGLOIDINE RT 411/
3-ALPHA-TIGLOYLTROPANE RT HHB
TROPINE RT CCO
XANTHOPHYLL FL HHB
ZEAXANTHIN FL HHB

PHOSPHORUS 400-30,250 FR ABS1/ CRC
PHYTIN-PHOSPHORUS 70-843 WOI
POTASSIUM 2,430-36,250 FR ABS1/ CRC
PROTEIN 5,700-157,000 FR ABS1/
RIBOFLAVIN 0.2-2.4 FR ABS1/ CRC
SODIUM 0-454 FR ABS1/ CRC
SUCCINIC-ACID 10-20 FR ABS1/
SUCROSE 3,140-25,060 FR ABS1/
SUGARS 32,400-57,400 FR ABS1/
SULFUR 270-3,250 FR WOI
THIAMIN 0.5-6 FR ABS1/ CRC
VIT-C 86-2,142 FR ABS1/
VIT-P 8-186 FR ABS1/
WATER 917,000-930,000 FR ABS1/ CRC
WITHAPHYSACARNONE LF MPI
WITHAPHYSACARPIN LF MPI
ZINC 35-71 FR ABS1/

ABS1/= Ostrzycka, J., Horbowicz, M.,
Dobrazanski, W., Jankiewicz, L.S. and
Borkowski, J. 1988. Nutritive Value of
Tomatillo Fruit (*Physalis ixocarpa* Brot.)
Act. Soc. Bot. Pol. 57(4): 507-521

PHYSALIS IXOCARPA BROT.

"TOMATILLO"

ASCORBIC-ACID 20-460 FR ABS1/ CRC
L-ASCORBIC-ACID 11-257 FR ABS1/
ASH 6,000-82,000 FR ABS1/ CRC
CALCIUM 70-2,580 FR ABS1/ CRC
CARBOHYDRATES 40,500-771,000 FR
ABS1/ CRC
BETA-CAROTENE 0.5-6 FR CRC ABS1/
CAROTENES 0.3-1.4 FR ABS1/
CELLULOSE 13,300 FR ABS1/
CHLORIDE 140-1,685 FR WOI
CITRIC-ACID 8,010-11,690 FR ABS/
COPPER 1-16 FR ABS1/ WOI
DEHYDROASCORBIC-ACID 65-1,971 FR
ABS1/
FAT 6,000-87,000 FR ABS1/ CRC
FIBER 6,000-72,000 FR CRC
FRUCTOSE 3,420-18,980 FR ABS1/
GLUCOSE 11,880-32,400 FR ABS1/
IRON 14-2,974 FR ABS1/ CRC
IXOCARPALACTONE PL JSG
MAGNESIUM 230-2,150 FR ABS1/ WOI
MALIC-ACID 116-1,500 FR ABS1/
NIACIN 20-253 FR ABS1/ CRC
OLIGOSACCHARIDES 12,100-40,200 FR
ABS1/
OXALIC-ACID 109-536 FR ABS1/
PECTIN 3-57 FR ABS1/

PHYSALIS PERUVIANA L.

"CAPE GOOSEBERRY"

"GROUND CHERRY"

ARACHIDIC-ACID 63 SD WOI
ASCORBIC-ACID 365-2,865 FR HHB
WOI
ASH 8,000-47,000 FR CRC WOI
CALCIUM 80-585 FR CRC WOI
CARBOHYDRATES 110,000-929,000 FR
CRC WOI
BETA-CAROTENE 0.14-84 FR CRC MPI
CHLOROGENIC-ACID LF WOI
CITRIC-ACID 22,000 FR WOI
COPPER 2-11 FR WOI
2,3-DEHYDROWITHANOLIDE-E PL
JSG
4-DEOXYPHYSALOLACTONE PL JSG
N,N,-DIMETHYLPHYSOPERUVINE RT
MPI
ELAIDIC-ACID SD HHB
FAT 2,000-12,000 FR CRC WOI
FAT 63,000 SD WOI
FIBER 32,000-232,000 FR CRC WOI
FLUORIDE 0.2 FR MPI
3-O-BETA-D-GLUCOPYRANOSIDE PL
JSG
GLUCOSE FR HHB
4BETA-HYDROXYWITHANOLIDE-E PL
JSG

4BETA-HYDROXYWITHANOLIDE-F PL
 JSG
 IRON 12-115 FR CRC WOI
 KAEMPFEROL? FR WOI
 KILOCALORIES 730-3,460 FR CRC
 LINOLEIC-ACID 23,625-41,830 SD MPI
 WOI
 MAGNESIUM 310-1,810 FR WOI
 MALIC-ACID
 MUCILAGE PL HHB
 NIACIN 3-81 FR CRC
 OLEIC-ACID 26,710 SD WOI
 PALMITIC-ACID 4,160 SD WOI
 PECTIN 7,000 FR HHB
 PERULACTONE PL JSG
 PHLOBAPHANE CX WOI
 PHOSPHORUS 550-4,215 FR CRC MPI
 WOI
 PHYSALACTONE-B PL JSG
 PHYSALIEN FR HHB
 PHYSALIN-A PL HHB
 PHYSALIN-B PL HHB
 PHYSALOLACTONE PL JSG
 PHYSALOLACTONE-B PL JSG
 PHYSALOLACTONE-B-B-3-O-BETA-D-
 GLUCOPYRANOSIDE LF MPI
 PHYSOPERUVINE RT CCO
 PHYSOPERUVINIUM—CHLORIDE RT
 MPI
 PHYTIN-PHOSPHORUS 180-1,050 FR
 WOI
 PHYTOSTEROL 400 CX HHB WOI
 POTASSIUM 320-18,710 FR CRC WOI
 POTASSIUM-CHLORIDE 750 CX
 WOI
 POTASSIUM-CITRATE 750 CX WOI
 PROTEIN 3,000-105,260 FR CRC WOI
 RESIN 2,000 FR HHB
 RIBOFLAVIN 0.2-1.4 FR CRC WOI
 RUTIN RT MPI
 BETA-SITOSTEROL RT MPI
 BETA-SITOSTEROL-D-GLUCOSIDE RT
 MPI
 SODIUM 9-58 FR CRC WOI
 STEARIC-ACID 3,400 FR WOI
 SUGARS 20,000 FR HHB
 SULFUR 430-2,515 FR WOI
 TANNINS 125,000-160,000 RT HHB
 TARTARIC-ACID FR WOI
 THIAMIN 0.5-4.7 FR CRC WOI
 WATER 789,000-829,000 FR CRC WOI
 WITHANOLIDE-E PL JSG
 WITHANOLIDE-S LF MPI
 WITHAPERUVIN-A PL JSG

WITHAPERUVIN-B RT CCO
 WITHAPERUVIN-C RT CCO
 WITHAPERUVIN-D LF MPI
 WITHAPERUVIN-E LF MPI
 XANTHOPHYLL FL HHB
 ZEAXANTHIN FL HHB

PHYSOSTIGMA VENENOSUM BALF.

“CALABAR BEAN”

ALKALOIDS 3,000-5,000 SD HHB
 BEHENIC-ACID SD CRC
 CALABACINE SD ALK
 CALABARINE SD CRC
 CALABAROL SD CRC
 CALABATINE SD ALK
 ESERAMINE SD ALK
 ESERANINE SD CRC
 ESERIDINE SD CRC
 ESERINE SD CCO
 GENESERINE 1,000 SD ALK HHB
 ISOPHYSOSTIGMINE SD CRC
 LINOLEIC-ACID SD CRC
 N-8-NORPHYSOSTIGMINE SD CRC
 OLEIC-ACID SD CRC
 PALMITIC-ACID SD CRC
 PHYSOSTERINE 1,500 SD CRC HHB
 PHYSOVENINE SD CRC
 PROTEIN 200,000-230,000 SD CRC HHB
 BETA-SITOSTEROL SD CRC
 STARCH 480,000-500,000 SD CRC HHB
 STEARIC-ACID SD CRC
 STIGMASTEROL SD CRC
 TRIFOLIANOL SD CRC

PHYTOLACCA AMERICANA L.

“POKEWEED”

3-ACETYLALEURITOLIC-ACID SD
 3-ACETYLOLEANOLIC-ACID SD HHB
 ALKALOIDS 22,000 FR HHB
 AMERICANIN SD
 ANTHOCYANIN 93,000 FR HHB
 ASCORBIC-ACID 1,360-16,184 SH
 ASTRAGALIN LF
 BETANIN SH hbb
 CAFFEIC-ALDEHYDE
 CALCIUM 530-6,307 SH JAD USA
 CALCIUM-OXALATE
 CARBOHYDRATES 37,000-441,000 SH
 JAD USA
 BETA-CAROTENE 52-621 SH JAD USA

CARYOPHYLLENE FR
 ESCULENTIC-ACID FR hhb
 FAT 4,000-48,000 SH JAD USA
 FRUCTOSE 14,000 FR HHB
 GLUCOSE 46,000 FR HHB
 GUM RT
 HEMICELLULOSE RT
 IRON 17-202 SH JAD USA
 ISOBETANINE FR HHB
 ISOPREBETANINE FR HHB
 ISOQUERCITRIN LF
 JALIGONIC-ACID RT
 NIACIN 12-143 SH JAD USA
 OLEANOLIC-ACID RT
 3-OXO-3-CARBOMETHOXY-24-
 NOROLEAN-12-EN-29-OIC-ACID PL
 JSG1
 OXYMYRISTIC-ACID RT
 PAP(=POKEWEED-ANTIVIRAL-
 PROTEIN)
 PHOSPHORUS 440-5,238 SH JAD USA
 PHYTOLACCIN
 PHYTOLACCAGENIC-ACID RT
 PHYTOLACCAGENIN RT
 PHYTOLACCANIN
 PHYTOLACCASAPONINS PL JSG
 PHYTOLACCASIDE PL JSG
 PHYTOLACCATOXIN PL JSG
 PHYTOLACCINIC-ACID PL JSG
 PHYTOLACCOGENIC-ACID PL JSG
 POKEBERRYGENIN PL JSG
 PREBETANINE FR
 PROTEIN 26,000-311,000 SH JAD USA
 QUERCETIN-3-L-ARABINO-7-D-
 GLUCOSIDE FR HHB
 RESIN RT
 RIBOFLAVIN 3-39 SH JAD USA
 ALPHA-SPINASTEROL FR HHB
 STARCH RT
 TANNIN RT
 THIAMIN 1-10 SH JAD USA
 WATER 916,000 SH USA
 XYLOSE RT

***PICEA GLAUCA* (MOENCH)
VOSS**

“WHITE SPRUCE”

BORNYL-ACETATE TW GEO
 CADINENE TW GEO
 D-CAMPHOR TW GEO
 DIPENTENE TW GEO
 EO 3,000 TW GEO

DL-FENCHYL-ALCOHOL TW GEO
 L-LIMONENE TW GEO
 BETA-PINENE TW GEO

***PICEA MARIANA* (MILLER) B.S.P.**

“BLACK SPRUCE”

L-BORNEOL 46 TW GEO
 L-BORNYL-ACETATE 1,705 TW GEO
 L-CAMPHENE 461 TW GEO
 DL-CAMPHOR 46 TW GEO
 D-DELTA-3-CARENE 230 TW GEO
 EO 4,610 TW GEO
 DL-LIMONENE 150 TW GEO
 L-LIMONENE 150 TW GEO
 MYRCENE 161 TW GEO
 L-ALPHA-PINENE 737 TW GEO
 L-BETA-PINENE 300 TW GEO
 SANTENE 115 TW GEO
 TERPINOLENE 46 TW GEO
 TRICYCLENONE 46 TW GEO

***PICRAMNA EXCELSA* (SW.)
PLANCHON**

**“JAMAICAN QUASSIA;
BITTERWOOD”**

ALKALOIDS 700 WD HHB
 GUM WD HHB
 ISOQUASSIN BK CRC
 N-METHOXY-1-VINYL-BETA-
 CARBOLINE PL JSG
 PECTIN BK CRC
 QUASSIN BK CRC
 BETA-SITOSTEROL BK CRC
 BETA-SITOSTERONE BK CRC
 THIAMIN 18,000? HHB

***PICRAMNA QUASSIOIDES* (D.
DON) BENNETT**

**“LIGNUM QUASSIA;
NIGAKI; SHURNI”**

1-ACETYL-BETA-CARBOLINE. RT
 CCO
 BETA-CARBOLIN-1-YL-4,8-
 DIMETHOXY-BETA-CARBOLIN-1-YL-
 ETHYL...
 1-CARBOXY-BETA-CARBOLINE PL
 JSG
 4,8-DIMETHOXY-1-ETHYL-BETA-
 CARBOLINE RT CCO

4,8-DIMETHOXY-1-(2-METHOXYETHYL)-BETA-CARBOLINE RT CCO
 1-HYDROXYMETHYL-BETA-CARBOLINE ST CCO
 KUMIJANS PL JSG
 KUSULACTONE PL JSG
 3-METHYLCANTHIN-2,6-DIONE RT CCO
 METHYL-BETA-CARBOLINE-1-CARBOXYLATE ST CCO
 METHYLNIGAKINONE ST CCO
 NEOQUASSIN WD CCO
 NIGAKIHEMIACETAL-A WD CCO
 NIGAKIHEMIACETAL-C WD CCO
 NIGAKILACTONE-A WD CCO
 NEGAKILACTONE-B WD CCO
 NIGAKILACTONE-C WD CCO
 NIGAKILACTONE-D WD CCO
 NIGAKILACTONE-E WD CCO
 NIGAKILACTONE-F WD CCO
 NIGAKILACTONE-M,N,H,J,K,L WD CCO
 NIGAKINONE ST CCO
 PALMITIC-ACID SD WOI
 PETROSELINIC-ACID WD HHB
 PICRASIDINES PL JSG
 PICRASIN WD HHB
 PICRASIN-A,B,C,D,E,F,G WD CCO
 QUASSIN 500 WD HHB

PICRORHIZA KURROOA ROYLE

"PICRORHIZA"

25-ACETOXY-2BETA-GLUCOSYLOXY-3,16,20 TRIHYDROXY-9-METHYL-18-NORLANOST-5,23-DIEN-22-ONE PL JSG
 APOCYNIN RH HHB
 ARVENIN-III RT PC29:1633
 GLUCOSE RH HHB
 GLUCOSIDO-VANILLOYL-GLUCOSE RH CCO
 2BETA-GLUCOSYLOXY-3,16,20,25-TETRAHYDROXY-9-METHYL-19-NORLANOSTA-5,23-DIENE-11,22-DIONE
 2BETA-GLUCOSYLOXY-16,20,22-TRIHYDROXY-9-METHYL-19-NORLANOSTA-5,24-DIENE-3,11-DIONE
 KURRIN 5,000 RH CCO WOI
 KUTHINOL RH CCO

KUTHIRTEROL RH CCO
 KUTKISTEROL 1,800 RH WOI
 KUTKIN 30,000-40,000 RH CCO HHB
 KUTKIOL 600 RH WOI
 KUTKISTEROL 1,800 RH WOI
 KUTKOSIDE RH HHB
 D-MANNITOL 5,000 RH CCO WOI
 PICRORHIZIN RH HHB
 PICROSIDE-I RH HHB
 PICROSIDE-II RH HHB
 TRIPALMITIN RH CCO
 VANILLIC-ACID 1,000 RH HHB

PILOCARPUS JABORANDI HOLMES

"INDIAN HEMP"

"PERNAMBUCO JABORANDI"

EO 5,000 LF JNP42:670
 LIMONENE 2,350 LF JNP42:670
 MYRCENE 25 LF JNP42:670
 ISOPILOCARPIDINE PL JSG
 ISOPILOCARPINE LF HHB
 PILOCARPINE 6,000-10,000 LF HHB
 PILOCARPIDINE LF HHB
 ALPHA-PINENE 125 LF JNP42:670
 SANDARACOPIMARADIENE 25 LF JNP42:670
 2-UNDECANONE 1,125 LF JNP42:670
 VINYL-DODECANOATE 25 LF JNP42:670

PILOCARPUS MICROPHYLLUS STAPF

"MARANHAO JABORANDI"

DELTA-CADINENE 115-165 LF JNP42:670
 CARYOPHYLLENE 450-475 LF JNP42:670
 ALPHA-COPAENE 75-285 LF JNP42:670
 EO 2,500-3,000 LF JNP42:670
 ALPHA-GUAIAENE 110 LF JNP42:670
 HUMULENE 100 LF JNP42:670
 ISOEPIPILOSINE LF JSG
 ISOPILOCARPIDINE PL JSG
 ISOPILOCARPINE LF HHB
 LIMONENE 50 LF JNP42:670
 BETA-OCIMENE 25 LF JNP42:670
 PILOCARPIDINE PL JSG
 PILOCARPINE 6,000-10,000 LF JNP42:670

PILOSINE LF HHB
 ALPHA-PINENE 25 LF JNP42:670
 SABINENE 90 LF JNP42:670
 2-TRIDECANONE 550-690 LF JNP42:670
 3,7,7-TRIMETHYLBICYCLO(3.1.1)-2-
 HEPTENE 300 LF JNP42:670

PILOCARPUS PENNATIFOLIUS
 LEM.

“PARAGUAY JABORANDI”

ISOPILOCARPINE LF HHB
 PILOCARPINE 2,000-4,000 LF HHB

PILOCARPUS RACEMOSUS L.

“GUADALUPE JABORANDI”

ALCOHOLS (26.4%) EO LF HHB
 ISOPILOCARPINE LF HHB
 METHYL-HEPTYLKETONE EO HHB
 METHYL-NONYLKETONE (20.6%EO)
 LF HHB
 PILOCARPINE 2,000-4,000 LF HHB

PIMENTA DIOICA (L.) MERR.

“ALLSPICE”

ACETONE
 ALLOAROMADENDRENE 12 LF-204 FR
 ALUMINUM 110
 TRANS-ANETHOLE
 AROMADENDRENE
 ASCORBIC-ACID 2012-2067 LF; 426 FR
 ASH 76,000-89,000 LF
 BARIUM 20
 BORON 9-25 FR BOB
 CALCIUM 7,224-8,000 FR; 10,056-11,166
 LF
 CIS-ALPHA-BERGAMOTENE
 ALPHA-CADINENE
 DELTA-CADINENE 51 FR; 50 LF
 GAMMA-CADINENE 51 FR; 50 LF
 10-ALPHA-CADINOL 66 FR
 CADMIUM -.05
 CALAMANENE 90 FR
 CALCIUM 7224 FR; 10,056-11,166 LF
 CALCIUM-OXALATE FR HHB
 CARBOHYDRATE 749,000-757,000
 DELTA-3-CARENE 30 FR
 BETA-CAROTENE 103-120 LF; 4 FR
 CARYOPHYLLENE 760 LF; 1,341 FR
 CARYOPHYLLENE-ALCOHOL
 CARYOPHYLLENE-ALDEHYDE

CARYOPHYLLENE-OXIDE
 CHAVICOL LF HHB
 CINEOLE 690
 1,8-CINEOLE 51 LF; 142 FR
 CINNAMALDEHYDE
 COBALT -.05
 COPAENE 9 LF; 15 FR
 BETA-COPAENE
 COPPER 5-10 BD USA
 CHROMIUM 5
 CUBENENE
 AR-CURCUMENE
 CYCLOSATIVENE
 P-CYMELE 78 LF; 87 FR
 P-CYMELE-8-OL 13 LF; FR 18
 ALPHA-P-DIMETHYL-STYRENE 9 LF;
 15 FR
 DOCOSANE
 DODECANE
 EIXOSANE
 BETA-ELEMENE
 EO 20,000-50,000 FR HHB
 EO 7,500-12,500 LF HHB
 10-EPI-ALPHA-CADINOL
 10-EPIZONARENE
 EPIGLOBULOL
 EPICUBENOL
 4,8-EPOXYTERPINOLENE
 ETHYL-BENZOATE
 EUGENOL 8,348 LF
 EUGENOL 7,000-36,000 FR HHB 411/
 EUGENOL-METHYL-ETHER 8,000-22,500
 FR HHB
 FAT 36,000-41,000 LF
 FLUORINE 5
 FIBER 175,000-179,000 LF
 FURFURALDEHYDE
 FUFUROL LF HHB
 GERANYL-ACETATE
 GLOBULOL 33 FR
 ALPHA-GURJUNENE 5 LF; 42 FR
 HEPTADECANE
 HEPTANAL
 HEXADECANE
 HEXANOL
 CIS-3-HEXENOL
 ALPHA-HUMULENE 405 FR
 BETA-HUMULENE 405 FR
 HUMULENE-EPOXIDE-I
 HUMULENE-EPOXIDE-II
 INTERMEDIOL
 IRON 60-85 FR; 76-95 LF
 ISOCARYOPHYLLENE
 ISOEUGENOL

ISOVALERALDEHYDE
 LEAD .8
 LEDENE 237 FR
 LEDOL
 LIMONENE 15 FR; 28 FR
 LINALOOL 5 LF; 42 FR
 ALPHA-MAALIENE
 MAGNESIUM 1,200-1,480 FR
 MALIC-ACID FR HHB
 MANGANESE 29-70 BD USA
 MERCURY -.05
 METHYL-BENZOATE
 2-METHYL-BUTANOL
 2-METHYL-BUTYL-ACETATE 3 FR
 METHYL-CHAVICOL 3 LF; 60 FR
 METHYL-EUGENOL 190 LF; 1,500 FR
 ALPHA-MUUROLENE 45 LF; 315 FR
 T-MUUROLOL
 MYRCENE 20 LF; 45 FR
 NIACIN 1.4-1.8 LF; 3.1 FR
 NONADECANE
 CIS-OCIMENE
 OCTADECANE
 OCTANOL
 ALPHA-PALUSTRINE
 PENTADECANE
 PENTANOL
 ALPHA-PHELLANDRENE 6 FR; 59 LF
 BETA-PHELLANDRENE
 PHOSPHORUS 1,100-1,235 FR; 1,173-
 1,399 LF
 PHYTOSTEROL 666 FR
 ALPHA-PINENE 14 FR; 20 LF
 BETA-PINENE
 POTASium 11,000-11,410 FR
 PROTEIN 117,000-134,000 FR
 RIBOFLAVIN 0.7 FR; 2.3-3.5 LF
 SABINENE
 ALPHA-SANTALENE
 SELINA-3,11-DIENE
 SELINA-4,11-DIENE
 SELINE-4(14),11-DIENE
 ALPHA-SELINENE 45 LF; 315 FR
 BETA-SELINENE
 DELTA-SELINENE
 SELENIUM .04
 SODIUM 800-842 FR
 SPATHULENOL 60 FR
 STRONTIUM 20
 TERPINEN-4-OL 1,260 FR
 ALPHA-TERPINENE 11 LF; 3 FR
 GAMMA-TERPINENE 17 LF; 35 FR
 ALPHA-TERPINEOL
 TERPINOLENE 27 LF; 42 FR

TETRACOSANE
 TETRADECANE
 THIAMIN 1.1 FR; 1.1-1.7 LF
 ALPHA-THUJENE 20 LF; 14 FR
 TOLUENE
 TRANS-P-MENTHA-1(10),5,DIENE-2-OL
 TRANS-2-HEXENAL
 TRANS-OCIMENE 17 LF; 35 FR
 TRICOSANE
 TRIDECANE
 UNDECANE
 VALERALDEHYDE
 VANADIUM 0.2
 ZINC 11-20 FR
 ZONARENE

PIMENTA RACEMOSA (MILL.)

J. W. MOORE

"BAYRUM TREE"

ALPHA-AMORPHENE 10-35 LF BML
 CRC
 ALPHA-CADINENE TR LF BML
 DELTA-CADINENE TR LF BML
 GAMMA-CADINENE TR LF BML
 CALACORENE TR LF BML
 CALAMENENE TR LF BML
 CARYOPHYLLENE 90-305 LF BML CRC
 BETA-CEDRENE TR LF BML
 CHAVICOL 1,100-7,345 LF BML CRC
 L,8-CINEOLE 200-680 LF BML CRC
 COPAENE 20-70 LF BML CRC
 BETA-COPAENE TR LF BML
 ALPHA-CUBEbine TR LF BML
 P-CYMENE 50-750 LF BML CRC
 ALPHA-P-DIMETHYL-STYRENE TR LF
 BML
 DOCOSANE LF TR BML
 EICOSANE TR LF BML
 DELTA-ELEMENE TR LF BML
 EO 10,000-34,000 LF CRC
 EUGENOL 3,860-19,100 LF BML CRC
 CIS-ALPHA-FARNESENE TR LF BML
 GERANIAL 1-18,090 LF BML CRC
 GERANIOL TR LF BML
 GERANYL-ACETATE 80-270 LF BML
 CRC
 GERMACRENE-D TR LF BML
 ALPHA-GURJUNENE TR LF BML
 HENEICOSANE TR LF BML
 HEPTADECANE TR LF BML
 HEXACOSANE TR LF BML
 HEXADECANE TR LF BML

- HEXANOL TR LF BML
 CIS-3-HEXENOL TR LF BML
 TRANS-3-HEXENOL TR LF BML
 LEDENE TR LF BML
 LIMONENE 140-6,870 LF BML CRC
 LINALOOL 130-1,020 LF BML CRC
 METHYLCHAVICOL 30-10,745 LF CRC
 METHYLEUGENOL 4,310-14,650 LF CRC
 METHYL-HEPTENONE 10-35 LF BML
 CRC
 MONOTERPENES 2,570-8,740 LF BML
 CRC
 ALPHA-MUUOLENE TR LF BML
 MYRCENE 3,160-23,800 LF BML CRC
 NERAL 50-11,080 LF CRC
 NEROL TR LF BML
 NERYL-ACETATE TR LF BML
 NONADECANE TR LF BML
 OCIMENE 100-340 LF BML CRC
 TRANS-OCIMENE 210-715 LF BML CRC
 OCTADECANE TR LF BML
 3-OCTANOL 30-170 LF BML CRC
 3-OCTANONE 30-340 LF BML CRC
 1-OCTEN-3-OL 100-440 LF BML CRC
 1-OCTEN-3-YL-ACETATE TR LF BML
 PENTACOSANE TR LF BML
 PENTADECANE TR LF BML
 ALPHA-PHELLANDRENE 280-950 LF
 BML CRC
 BETA-PHELLANDRENE 230-780 LF BML
 CRC
 ALPHA-PINENE 30-950 LF BML CRC
 BETA-PINENE 1-35 LF BML CRC
 SABINENE TR PL BML
 TERPINEN-4-OL 30-190 LF BML CRC
 TERPINEN-4-YL-ACETATE TR LF BML
 GAMMA-TERPINENE TR PL BML
 ALPHA-TERPINEOL 80-415 LF BML
 CRC
 TERPINOLINE 30-100 LF BML CRC
 TETROCOSANE TR LF BML
 TETRADECANE TR LF BML
 ALPHA-THUJENE TR PL BML
 TRICOSANE TR LF BML
 TRIDECANE TR LF BML
 ALPHA-YLANGENE TR LF BML
-
- PIMPINELLA ANISUM* L.**
 "ANISE"
 ACETALDEHYDE FR
 ACETOANISOLE 100 FR
 BETA-AMYRIN
 CIS-ANETHOLE 200 FR
 TRANS-ANETHOLE 14,000-54,000
 ANETHOL-GLYCOL
 ANISIC-ACID FR 411/
 ANISALDEHYDE 300 FR
 ANISKETONE 731 FR
 ANISYL-ALCOHOL 100-1,750 FR
 APIGENIN-7-GLUCOSIDE FR 411/
 ASH 66,000-77,000 FR
 ASCORBIC-ACID 8-9 FR
 BERGAPTEN FR 411/
 BETA-BISABOLENE
 BORON 20 FR BOB
 CAFFEIC-ACID
 CALCIUM 7,138-7,843 FR
 CAMPHENE 119 FR
 CARBOHYDRATES 509,000-552,000 FR
 CARVENE 4,240 FR
 D-CARVONE PL 411
 BETA-CARYOPHYLLENE
 CHLOROGENIC-ACID
 CHOLINE
 COPPER 9 SD USA
 P-CRESOL
 P-CREOSOL
 AR-CURCUMENE 200 FR
 DIANETHOLE FR 411/
 DIHYDROCARVYL-ACETATE
 EO 10,000-60,000
 EPOXY-PSEUDOISOEUGENOL-(2-
 METHLY-BUTYRATE)
 ESTRAGOLE FR 411/
 EUGENOL
 BETA-FARNESENE
 FAT 176,000-304,000 FR
 FIBER 161,000 FR
 FURFURAL 30,000 FR
 4-(BETA-D-GLUCOPYRANOSYLOXY)-
 BENZOIC-ACID
 GAMMA-HIMACHALENE
 HYDROQUINONE
 IMPERATORIN LF JCE17:1859
 IRON 391-409 FR
 ISOCARYOPHYLLENE
 ISOCHAVIBETOL 250 FR
 ISOORIENTIN
 ISOVITEXIN FR 411/
 LIMONENE 25-459 FR
 LINALOOL 50 FR 411/
 LUTEOLIN-7-GLYCOSIDE
 LUTEOLIN-7-0-XYLOSIDE
 MAGNESIUM 1,878 FR
 MANGANESE 23 FR USA
 MANNITOL RT
 P-METHOXYPHENYLACETONE

4-METHOXY-2-(TRANS-1-PROPENYL)-
 PHENYL-2-METHYLBUTYRATE
 METHYL-CHAVICOL 1,050 FR
 1-(1-METHOXY-CYCLOHEXYL)-2-
 HYDROXY-4-METHYL-BENZENE-
 MET.-CHAV
 1-METHYL-4-ISOBUTYLBENZENE
 1-METHYL-4-(1-PROPENYL)-BENZENE
 MYRICANOL RT
 MYRISTICIN
 CIS-OCIMENE 25 FR
 PHELLANDRENE 408 FR
 PHOSPHORUS 4,862 FR
 PHOTOANETHOLE FR 411/
 ALPHA-PINENE 1-306 FR
 BETA-PINENE 1 FR
 POTASSIUM 15,923 FR
 PRISTANE
 PROAZULENE
 1-PROPENYL-2-HYDROXY-5-METHOXY-
 BENZENE-2-(2-METHYL-BUTYRATE)
 FR 411/
 PROTEIN 188,000-213,000 FR
 PSEUDOISOEUGENOL-(2-METHYL-
 BUTYRATE)
 QUERCETIN-GLUCOSIDES FR 411/
 QUERCETIN-3-GLUCURONIDE
 RUTIN FR 411/
 SABINENE 1 FR
 SCOPARONE LF JCE17:1859
 SCOPOLETIN FR 411/
 SCOPOLETIN LF JCE17:1859
 SESELIN LF JCE17:1859
 SODIUM 177 FR
 SQUALENE
 STIGMASTEROL
 ALPHA-TERPINEOL 1 FR
 2,6,10,14-TETRAMETHYLPENTADECANE
 UMBELLIFERONE FR 411/
 UMBELLIPRENINE
 ZINC 59 FR
 ALPHA-ZINGIBERENE

PINELLIA TERNATA
BREITENBACH

“PAN-HSIA; BAN-XIA”

ARGININE TU CCO
 ASPARTIC-ACID TU CCO
 CALCIUM 4,180-10,000 TU CAL SMO
 CALCIUM-OXALATE TU CCO
 CHOLINE ST CCO
 COPPER 2-4 TU CAL SMO

3,4-DIHYDROXYBENZALDEHYDE TU
 CCO
 3,4-DIHYDROXYBENZALDEHYDE-
 DIGLUCOSIDE TU CCO
 EO 30-130 TU HHB
 L-EPHEDRINE ST CCO
 D-GLUCOSE TU CCO
 D-GLUCURONIC-ACID TU CCO
 GLUTAMIC-ACID TU CCO
 GLYCINE TU CCO
 HOMOGENSIC-ACID TU CCO
 HOMOGENSIC-ACID-GLUCOSIDE TU
 CCO
 IRON 70-95 TU CAL SMO
 ISOOLEIC-ACID TU CCO
 MAGNESIUM 560-710 TU CAL SMO
 MANGANESE 11-46 TU CAL SMO
 DELTA-6-OCTADECENOIC-ACID TU
 CCO
 OLEIC-ACID TU CCO
 ORNITHINE TU CCO
 PALMITIC-ACID TU CCO
 POTASSIUM 480-1,940 TU CAL SMO
 PROTEIN 46,000 TU HHB
 L-RHAMNOSE TU CCO
 SERINE TU CCO
 BETA-SITOSTEROL TU CCO
 BETA-SITOSTEROL-3-O-BETA-D-
 GLUCOSIDE TU CCO
 SODIUM 192-2,200 TU CAL SMO
 STARCH 690,000 TU HHB
 STEARIC-ACID TU CCO
 ZINC 14-18 TU CAL SMO

***PINUS ECHINATA* MILLER**

“SHORTLEAF PINE”

ALUMINUM 255-4,200 SH USG
 ASH 17,000-42,000 SH USG
 BARIUM 5-21 SH USG
 BORON 2-21 SH USG
 CADMIUM 0-2 SH USG
 CALCIUM 1,088-11,760 SH USG
 CHROMIUM 0.08-1.26 SH USG
 COBALT 0.03-1.26 SH USG
 COPPER 0.8-2.1 SH USG
 FLUORINE 0-0.42 SH USG
 IODINE 4-6 SH USG
 IRON 34-630 SH USG
 LEAD 1.7-63 SH USG
 LITHIUM 0.068-0.42 SH USG
 MAGNESIUM 255-2,100 SH USG
 MANGANESE 51-1,260 SH USG
 MERCURY 0-0.025 SH USG

NICKEL 0.26-8.4 SH USG
 PHOSPHORUS 306-1,512 SH USG
 POTASSIUM 952-8,400 SH USG
 SELENIUM 0.02-0.2 SH USG
 SILVER 0-0.126 SH USG
 SODIUM 3-63 SH USG
 STRONTIUM 3-84 SH USG
 TITANIUM 3-84 SH USG
 VANADIUM 0.08-1.26 SH USG
 YTTERBIUM 0.03-0.13 SH USG
 ZINC 6-88 SH USG
 ZIRCONIUM 0.3-6.3 SH USG

PINUS ELLIOTTII ENGELM.

"SLASH PINE"

ABIETIC-ACID RE CRC
 BORNEOL LF CRC
 CADINENE LF CRC
 CAMPHENE LF CRC
 TRANS-COMMUNIC-ACID PL JSG
 CREOSOL TAR CRC
 DEHYDROABIETIC-ACID RE CRC
 DIPENTENE RE CRC
 EO 200,000-250,000 RE CRC GEO
 EO 3,000 LF CRC
 GUALACOL TAR CRC
 ISOPIMARIC-ACID RE CRC
 METHYLCREOSOL TAR CRC
 NEOABIETIC-ACID RE CRC
 PALUSTRIC-ACID RE CRC
 PHENOL TAR CRC
 PIMARIC-ACID RE CRC
 L-ALPHA-PINENE 123,000-189,000 RE
 GEO
 L-BETA-PINENE 42,400-85,000 RE GEO
 BETA-PINENE LF CRC
 SANDARACOPIMARIC-ACID
 TOLUENE TAR CRC
 WATER 20,000 RE CRC
 XYLENE TAR CRC

PINUS MUGO TURRA"DWARF PINE;
 SWISS MOUNTAIN PINE"

ANISALDEHYDE LF GEO
 ARABINOGALACTAN POLLEN HHB
 ARABINOSE POLLEN HHB
 BORNYL-ACETATE LF GEO
 BORNYL-CAPROATE LF GEO
 BORNYL-PROPIONATE LF GEO
 CADINENE LF GEO

CAMPHENE LF AYL
 CAPROALDEHYDE LF GEO
 DELTA-3-CARENE LF GEO
 CRYPTONE LF GEO
 CUMINALDEHYDE LF GEO
 DIPENTENE LF GEO
 EO 1,200-6,100 LF GEO
 ESTERS 62-564 LF GEO
 FUCOSE POLLEN HHB
 GALACTOSE POLLEN HHB
 GLUCOSE POLLEN HHB
 HEXANAL LF AYL
 KAEMPFEROL WD HHB
 D-LIMONENE LF AYL
 L-LIMONENE LF GEO
 MYRCENE LF AYL
 ALPHA-PHELLANDRENE LF GEO
 BETA-PHELLANDRENE LF GEO
 L-ALPHA-PINENE LF GEO
 BETA-PINENE LF GEO
 PINOCEMBRIN WD HHB
 PINOSYLVIN WD HHB
 PINOSYLVINMONOMETHYLETHER WD
 HHB
 PUMILIOL LF GEO
 PUMILONE LF GEO
 QUERCETIN WD HHB
 XYLOGALACTURONANE POLLEN HHB
 XYLOSE POLLEN HHB

PINUS PALUSTRIS MILLER

"LONGLEAF PINE"

ABIETIC-ACID RE AYL
 CAMPHENE RE AYL
 3-CARENE RE AYL
 P-CYMENE RE AYL
 DEHYDROABIETIC-ACID RE AYL
 DIPENTENE RE AYL
 EO 200,000-250,000 RE GEO
 EO 4,000 LF CRC
 ISODEXTROPIMARINAL PL JSG
 ISOPIMARIC-ACID RE AYL
 LAEVOPIMARIC-ACID RE AYL
 BETA-MYRCENE RE AYL
 NEOABIETIC-ACID RE AYL
 PALUSTRIC-ACID RE AYL
 BETA-PHELLANDRENE RE AYL
 PIMARIC-ACID
 ALPHA-PINENE 128,600-160,750 RE GEO
 BETA-PINENE 63,600-79,500 RE GEO
 SANDARACOPIMARIC-ACID RE AYL
 SITOSTEROL RE AYL

***PINUS STROBUS* L.**

“EASTERN WHITE PINE”

CIS-ABIENOL
 TRANS-ABIENOL
 ABIETIC-ACID RS 265,000
 AMINO-ACIDS 4,620 SD HHB
 AMINO-ACIDS 4,530 LF HHB
 ANTICOPALIC-ACID LF WD
 CHRYSIN WD
 CONIFERIN BK
 CONIFERYL-ALCOHOL BK AYL
 CRYPTOSTROBIN WD
 DEHYDROABIETIC-ACID RS
 ELLIOTIC-ACID RS
 FAT
 ISOPIMARIC-ACID RS HHB
 LAEVOPIMARIC-ACID RS
 LEUCOCYANIDIN
 MANOXYIDE BK
 3-BETA-METHOXY-14-SERRATEN-21-ON
 MUCILAGE AYL
 NEOABIETINIC-ACID
 NUCLEIC-ACIDS
 PALUSTRIC-ACID RS
 PIMARIC-ACID RS HHB
 PINOBANKSIN WD
 PINOCEMBRIN WD
 PINOSTROBIN WD
 PINOSYLVIN-MONOMETHYL-ESTER
 SANDARACOPIMARIC-ACID RS
 STROBAL BK
 STROBIC-ACID PL JSG
 STROBINIC-ACID RS
 STROBOL BK HHB
 STROBOPININ WD
 TECTOCHRYSIN WD

***PINUS SYLVESTRIS* L.**

“SCOTCH PINE”

ABIETA-8,11,13-TRIENE-15,18-DIOL PL
 JSG
 ABIETIC-ACID 180,000 RE HHB
 ABIETINAL RE HHB
 ABIETINOL RE HHB
 ADENINE FL HHB
 ANISALDEHYDE LF HHB
 ARABINOSE 600 LF HHB
 ASCORBIC-ACID 3,000 LF HHB
 BORNEOL LF HHB
 BORNYL-ACETATE 60-175 LF AYL GEO

BUTYRIC-ACID LF HHB
 DELTA-CADINENE RE HHB
 GAMMA-CADINENE RE HHB
 CAMPESTEROL BK HHB
 CAMPHENE RE HHB
 CAPRIC-ACID LF HHB
 CAPROIC-ACID LF AYL
 CAPRONALDEHYDE LF GEO
 DELTA-3-CARENE (1.3-36% EO) RE
 HHB
 DELTA-3-CARENE (40-50% EO) RT GEO
 D-DELTA-4-CARENE RT HHB
 CAROTENES 170 LF HHB
 ALPHA-CAROTENE LF HHB
 BETA-CAROTENE LF HHB
 GAMMA-CAROTENE LF HHB
 CARYOPHYLLENE LF AYL
 (+)-CATECHIN PL JSG
 CEROTIC-ACID FL HHB
 CHAMAZULENE LF AYL
 CHOLINE 3,400 FL HHB
 1,8-CINEOLE LF HHB
 CITRAL LF AYL
 COPABORNEOL ST HHB
 COPAENE RE HHB
 BETA-COPAENE ST HHB
 CRYPTONE LF HHB
 CUMINALDEHYDE LF HHB
 DEHYDROABIETANE RE HHB
 DEHYDROABIETIC-ACID 70,000 RE
 HHB
 DEHYDROABIETINAL RE HHB
 DEHYDROPINIFOLIC-ACID LF HHB
 DIHYDROCONIFERYL-ALCOHOL BK
 HHB
 DIHYDRO-P-COUMARIC-ALCOHOL BK
 HHB
 DIHYDROQUERCETIN BK HHB
 DIHYDRO-BETA-SITOSTEROL BK HHB
 DIPENTENE RE HHB
 EO 2,000-5,000 LF GEO HHB
 (-)-EPICATECHIN PL JSG
 EPIMANOILOXIDE RE HHB
 ESTERS 64-122 LF GEO
 FERULIC-ACID BK HHB
 FRUCTOSE 25,000 LF HHB
 FRUCTOSE BK HHB
 FURFURAL RT GEO
 GALACTOSE 30 LF HHB
 GLUCOSE 22,000 LF HHB
 GLUCOSE BK HHB
 GUAIACYL-GLYCERIN-BETA-D-
 GLUCOSIDE LF HHB

- GUANOSINE FL HHB
 L-HISTIDINE FL HHB
 3-HYDROXY-1(4-HYDROXY-3-METHOXYPHENYL)-1-PROPANONE
 BK HHB
 D-INOSITOL BK HHB
 MYO-INOSITOL BK HHB
 ISOCAPROIC-ACID LF AYL
 ISODEXTROPIMARIC-ACID 80,000 RE
 HHB
 ISOPIMARA-7,15-DIEN-18-AL
 ISOPIMARA-7,15-DIENE
 ISOPIMARIC-ACID PL JSG
 8,9-ISOPIMARIC-ACID PL JSG
 ISOPIMARINAL RE HHB
 JUNIPERIC-ACID LF HHB
 LIMONENE RE HHB
 D-LIMONENE LF GEO
 L-LIMONENE LF GEO
 LONGICYCLENONE RE HHB
 ALPHA-LONGIPINENE RE HHB
 LONGIFOLENE RE HHB
 LUTEIN LF HHB
 LUTEIN-EPOXIDE LF HHB
 MALONIC-ACID BK HHB
 MELIBIOSE 3,000 LF HHB
 P-MENTHANOL-4 RT HHB
 M-MENTH-6-EN-8-OL RE HHB
 MESOINOSITOL 3,000 LF HHB
 METHYL-DEHYDROABIETANE RE
 HHB
 D-MYRCENE RE GEO
 MUUROLENE RE HHB
 ALPHA-MUUROLENE ST HHB
 EPSILON-MUUROLENE ST HHB
 GAMMA-MUUROLENE ST HHB
 BETA-MYRCENE LF HHB
 NEOABIETIC-ACID 180,000 RE HHB
 NEOXANTHIN LF HHB
 N-NONACOSANE BK HHB
 18-NORDEHYDROABIETAN-4-ALPHA-
 OL PL JSG
 18-NORDEHYDROABIET-4(19)-ENE RE
 HHB
 18-NORDEHYDROABIET-4-ALPHA-OL
 RE HHB
 19-NORISOPIMARA-8,14,15-DIEN-3-ONE
 PL JSG
 18-NORPIMARA-8,15-DIEN-4-ALPHA-OL
 RE HHB
 19-NORPIMARA-8(14),15-DIEN-3-ONE
 PL JSG
 CIS-BETA-OCIMENE LF AYL
 PALUSTRIC-ACID 100,000 RE HHB
 PARAHYDROXYBENZOIC-ACID BK
 HHB
 ALPHA-PHELLANDRENE LF GEO
 BETA-PHELLANDRENE RE HHB
 PHENOL WD HHB
 PIMAR-15-EN-4,8-DIOL RE HHB
 PIMARADIENE RE HHB
 D-PIMARIC-ACID 80,000 RE HHB
 L-PIMARIC-ACID 180,000 RE HHB
 PIMARINAL RE HHB
 PIMARINOL RE HHB
 ALPHA-PINENE RE HHB
 ALPHA-PINENE (17.5-20% EO) RT GEO
 ALPHA-PINENE 600-2,500 LF HHB
 BETA-PINENE RE HHB
 BETA-PINENE (17.5-20% EO) RT GEO
 BETA-PINENE 200-1,500 LF HHB
 PINICORRETIN BK HHB
 (+)-PINIFOLIC-ACID PL JSG
 PINIPICRIN LF HHB
 PINITOL 20,000 LF HHB
 PINITOL BK HHB
 PINOBANKSIN ST HHB
 PINOCEMBRIN WD HHB
 PINOSYLVIN (0.25%) WD HHB
 PINOSYLVIN 8,000 WD CCO
 PINOSYLVINMONOMETHYLETHER
 (0.3%) WD HHB
 PROPIONALDEHYDE RT HHB
 PROTOCATECHUIC-ACID BK HHB
 QUERCETIN BK HHB
 QUERCETIN-7-BETA-GLUCOSIDE LF
 HHB
 QUINIC-ACID BK HHB
 RAFFINOSE 8,000 LF HHB
 RAFFINOSE BK HHB
 SABINENE LF AYL
 SABINIC-ACID LF HHB
 SEQUOYITOL BK HHB
 SHIKIMIC-ACID BK HHB
 BETA-SITOSTEROL BK HHB
 SUCROSE 17,000 LF HHB
 SUCROSE BK HHB
 TANNIN 169,000 BK HHB
 ALPHA-TERPINENE RT GEO
 TERPINENOL RT GEO
 TERPINEOL RT GEO
 TETRACOSANOL-(1) BK HHB
 VALERIC-ACID LF HHB
 VANILLIC-ACID BK HHB
 VIOLAXANTHIN LF HHB
 VIT-E 280 LF HHB
 XYLOSE 200 LF HHB
 BETA-YLANGENE LF HHB

PIPER ANGUSTIFOLIUM RUIZ
AND PAV.

“MATICO”

ARTHRANTIC-ACID LF HHB
EO 9,000-35,000 LF HHB
MATICINE LF HHB
MUCILAGE LF HHB
RESIN LF HHB
TANNIN LF HHB

PIPER AURITUM HBK.

“CORDONCILLO”

ASCORBIC-ACID 490-3,370 LF CRC JFM
ASH 24,000-135,000 LF CRC
CALCIUM 2,570-14,440 LF CRC
CARBOHYDRATES 82,500-567,000 LF
CRC JFM
BETA-CAROTENE 34-193 LF CRC
CEPHARADIONE-A PL JSG
CEPHARADIONE-B PL JSG
EO 4,700-5,800 LF JFM
FAT 14,000-79,000 LF CRC
FIBER 22,000-124,000 LF CRC
IRON 48-315 LF CRC JFM
KILOCALORIES 570-3,200 LF CRC
NIACIN 9-100 LF CRC JFM
PHOSPHORUS 490-2,920 LF CRC JFM
PROTEIN 39,000-219,000 LF CRC
RIBOFLAVIN 2.4-13.5 LF CRC
SAFROLE LF JFM
THIAMIN 1.2-6.7 LF CRC
WATER 804,000-822,000 LF CRC JFM

PIPER BETEL L.

“BETEL PEPPER”

ALLYL-CATECHOL 50-2,600 LF WOI
4-ALLYL-PYROCATECHOL LF WOI
ARECAIDINE? PL JSG
ARECOLINE? PL JSG
ASCORBIC-ACID 43-2,130 LF WOI
ASH 23,000-157,500 LF WOI
ASPARAGINE LF WOI
CADINENE 50-3,800 LF WOI
CALCIUM 2,300-15,750 LF WOI
CARBOHYDRATES 61,000-418,000 LF
WOI
BETA-CAROTENE 19-175 LF JAD
CARVACROL 45-2,350 LF WOI
CARYOPHYLLENE 60-5,000 LF WOI
CHAVIBETOL 0-4,000 LF WOI

CHAVICOL 100-7,000 LF WOI
CINEOLE 50-2,600 LF WOI
P-CYMENE 25-1,050 LF WOI
DIASTASE 8,000-18,000 LF HHB
EO 2,000-42,000 LF HHB WOI
ESTRAGOLE 0-6,130 LF WOI
EUGENOL 535-17,850 LF WOI
EUGENOL-METHYL-ETHER 80-6,635 LF
WOI
FAT 8,000-135,000 LF WOI
FIBER 23,000-157,500 LF WOI
GABA
GLUCOSE 14,000-32,000 LF WOI
HYDROXY-CHAVICOL LF WOI
IRON 35-240 LF WOI
NIACIN 6-48 LF WOI
ORNITHINE LF WOI
OXALIC-ACID LF WOI
PHOSPHORUS 400-2,740 LF WOI
POTASSIUM-NITRATE 2,600-4,200 LF
WOI
PYROCATECHIN PL CRC
PROTEIN 31,000-212,000 LF CRC
RIBOFLAVIN 0.2-2 LF WOI
STARCH 10,000-31,000 LF WOI
SUCROSE 6,000-25,000 LF WOI
SUGARS 24,000-56,000 LF WOI
TANNIN 10,000-20,500 LF WOI
TERPENENE LF HHB
THIAMIN 0.1-4.8 LF WOI
WATER 854,000 LF WOI

PIPER CUBEBA L. f.

“CUBEB”

APIOLE 300-600 FR BML
ALLO-AROMADENDRENE 4,200-8,400
FR BML
ASARONE FR BML
AZULENE FR WOI
BICYCLOSQUIPHELLANDRENE PL
JSG
BETA-BISABOLENE 1,500-3,000 FR BML
DELTA-CADINENE 8,800-17,600 FR BML
L-CADINOL 150-600 FR WOI
10-(ALPHA)-CADINOL 1,000-2,000 FR
BML
CALAMENENE 3,700-7,400 FR BML
D-DELTA-4-CARENE 300-1,200 FR WOI
CARYOPHYLLENE 3,700-7,400 FR BML
CESARONE 3,700-4,700 FR BML
1,4-CINEOLE 300-1,200 FR CCO WOI
1,8-CINEOLE 700-1,400 FR BML
COPAENE 10,400-20,800 FR BML

ALPHA-CUBEBENE 7,100-14,200 FR
BML
BETA-CUBEBENE 11,000-22,000 FR
BML
CUBEBIC-ACID FR WOI AYL
CUBEBIN 25,000 FR AYL
CUBEBINOLIDE FR CCO
CUBEBOL 10,000-20,000 FR BML
CUBENOL 1,750-3,500 FR BML
DILLAPIOLE FR BML
DIPENTENE FR WOI
BETA-ELEMENE 1,200-2,400 FR BML
EO 50,000-20,000 FR BML
EPICUBENOL 1,750-3,500 FR BML
EX BACTERICIDE WOI
GUM 80,000 FR AYL
GAMMA-HUMULENE FR BML
1-ISOPROPYL-4-METHYLENE-7-
METHYL-1,2,3,6,7,8,9-HEPTAHYDRO...
LEDOL FR BML
LIMONENE FR AYL
LINALOOL FR BML
ALPHA-MUUROLENE 1,200-2,400 FR
BML
MYRCENE FR AYL
NEROLIDOL 3,500-7,000 FR BML
OCIMENE FR AYL
ALPHA=PHELLANDRENE
ALPHA-PINENE 1,100-2,200 FR BML
BETA-PINENE FR AYL
RESINS 30,000-37,000 FR AYL
RESINOIDS 64,000-85,000 FR WOI
SABINENE 4,600-9,200 FR BML
SABINOL FR CCO
SAFROLE FR BML
ALPHA-TERPINENE FR AYL
GAMMA-TERPINENE FR AYL
ALPHA-TERPINEOL FR BML
ALPHA-THUJENE 1,100-2,200 FR BML

PIPER METHYSTICHUM FORST.

“KAVA-KAVA”

BENZOIC-ACID PL CRC
CINNAMIC-ACID PL CRC
CINNAMYLDENACETOL PL HHB
DEMETHOXYANGONIN PL CRC
DESMETHOXYANGONIN PL HHB
DIHYDROKAWAIN PL HHB
DIHYDROKAWAIN-5-OL PL HHB
DIHYDROMETHYSTICIN PL HHB
5-DIHYDROANGONIN PL CRC
11,12-DIMETHOXYDIHYDROKAWAIN
PL HHB

2',4'-DIMETHYLCHALCONARINGENIN
PL HHB
FLAVOKAWIN-A PL HHB
FLAVOKAWIN-B PL HHB
FLAVOKAWAIN-C PL JSG
11-HYDROXY-12-
METHOXYDIHYDROKAWAIN PL HHB
KAWAIN PL HHB
KAWAINIC-ACID PL HHB
11-METHOXYNORYANGONIN PL HHB
11-METHOXYANGONIN PL HHB
3,4-(METHYLENE-DIOXY)
CINNAMYLDENACETOL PL HHB
METHYSTICIN PL HHB
PIPERMETHYSTINE PL JSG
5,6,7,8-TETRAHYDROANGONIN PL
JSG
YANGONIN PL HHB

PIPER NIGRUM L.

“BLACK PEPPER”

ASCORBIC-ACID 10 FR WOI
ASH 42,932-60,000 FR HHB USA
BENZOIC-ACID FR ABS 4/
ALPHA-CIS-BERGAMOTENE FR
ABS 4/
ALPHA-TRANS-BERGAMOTENE FR
ABS 4/
BETA-BISABOLENE FR HHB
BORNEOL FR ABS 4/
BORON 0.5-18 FR BOB
BUTYRIC-ACID FR ABS 4/
N-BUTYOPHENONE FR ABS 4/
DELTA-CADINENE FR HHB
GAMMA-CADINENE FR ABS 4/
5,10(15)-CADINENE-4-OL FR ABS 4/
CALAMENE FR HHB
CALAMENENE FR ABS 4/
CALCIUM 4,286-4,989 FR USA
CAMPHENE FR HHB
CAMPHOR FR ABS 4/
CARBOHYDRATE 648,100 FR USA
DELTA-3-CARENE FR ABS 4/
BETA-CAROTENE 0.114-0.128 FR USA
CARVACROL FR ABS 4/
CIS-CARVEOL FR ABS 4/
TRANS-CARVEOL FR ABS 4/
CARVETONACETONE FR ABS 4/
CARVONE FR ABS 4/
CARYOPHYLLA-3(12),7(15)DIEN-4-
BETA-OL FR ABS 4/
CARYOPHYLLA-2,7(15)-DIEN-4-BETA-
OL FR ABS 4/

CARYOPHYLLA-2,7(15)-DIEN-4-OL FR
 ABS 4/
 BETA-CARYOPHYLLENE FR CCO
 BETA-CARYOPHYLLENE-ALCOHOL FR
 ABS 4/
 CARYOPHYLLENE-KETONE FR ABS 4/
 CARYOPHYLLENE-OXIDE FR CCO
 CHAVICINE FR CCO
 CHLORINE 2,700-5,100 FR WOI
 CHROMIUM 3.0-3.5 FR ABS 5/
 1,8-CINEOLE FR ABS 4/
 CINNAMIC-ACID FR ABS 4/
 CITRAL FR HHB
 CITRONELLAL FR HHB
 CITRONELLYL-ACETATE FR HHB
 COBALT 0.3-0.4 FR ABS 5/
 ALPHA-COPAENE FR HHB
 COPPER 9-20 FR ABS USA
 CRYPTONE FR WOI
 CUBEbine FR HHB
 ALPHA-CUBEbine FR ABS 4/
 BETA-CUBEbine FR ABS
 AR-CURCUMENE FR ABS 4/
 P-CYMENE FR ABS 4/
 P-CYMENE-8-METHYL-ETHER FR
 ABS 4/
 P-CYMENE-8-OL FR ABS 4/
 DIHYDROCARVEOL FR ABS 4/
 DIHYDROCARVONE FR ABS 4/
 BETA-ELEMENE FR HHB
 DELTA-ELEMENE FR ABS 4/
 EO 10,000-26,000 FR HHB
 EPOXYDIHYDROCARYOPHYLLENE FR
 WOI
 EUGENOL FR ABS 4/
 BETA-FARNESENE FR ABS 4/
 FAT 30,940-77,000 FR HHB USA
 FIBER 130,056-148,449 FR USA
 GABA FR WOI
 GERANYL-ACETATE FR HHB
 ALPHA-GUAIENE FR ABS 4/
 HELIOTROPIN FR GEO
 HEXANOIC-ACID FR ABS 4/
 ALPHA-HUMULENE FR ABS 4/
 IODINE 0.090 FR WOI
 IRON 95-407 FR USA ABS 5/
 ISOBUTYL-ISOVALERATE FR HHB
 ISOBUTYL-CAPROATE FR HHB
 ISOCARYOPHYLLENE FR ABS 4/
 ISOCHAVINIC-ACID FR WOI
 ISOPULEGOL FR HHB
 KILOCALORIES 2,550-2,856 FR USA
 LAURIC-ACID 400-447 FR USA
 D-LIMONENE FR HHB
 L-LIMONENE FR HHB
 LIMONEN-4-OL FR HHB
 LINALOOL FR HHB
 LINALYL-ACETATE FR HHB
 LINOLEIC-ACID 13,200-14,750 FR USA
 ALPHA-LINOLENIC-ACID 2,200-2,458
 FR USA
 MAGNESIUM 1,809-2,319 FR USA
 MANGANESE 19-56 (-480 WOI) FR ABS
 5/ USA
 1,8-MENTHADIEN-2-OL FR HHB
 CIS-2,8-MENTHADIEN-2-OL FR ABS 4/
 3,8(9)-P-MENTHADIEN-1-OL FR ABS 4/
 1(7),2-P-MENTHADIEN-6-OL FR ABS 4/
 1(7),2-P-MENTHADIEN-4-OL FR ABS 4/
 1,8(9)-P-MENTHADIEN-5-OL FR ABS 4/
 1,8(9)-P-MENTHADIEN-4-OL FR ABS 4/
 2,8-P-MENTHADIEN-1-OL FR HHB
 CIS-P-2-MENTHEN-1-OL FR ABS 4/
 M-METHYL-ACETOPHENONE FR
 ABS 4/
 P-METHYL-ACETOPHENONE FR ABS 4/
 3-METHYL-BUTYRIC-ACID FR ABS 4/
 METHYL-CAFFEIC-ACID-PIPERIDIDE
 FR WOI
 METHYL-CARVACROL FR ABS 4/
 METHYL-CINNAMATE FR HHB
 METHYL-CYCLOHEPTA-2,4-DIEN-6-ONE
 PL JSG
 METHYL-EUGENOL FR ABS 4/
 METHYL-HEPTANOATE FR ABS 4/
 METHYL-OCTANOATE FR ABS 4/
 2-METHYL-PENTANOIC-ACID FR
 ABS 4/
 N-METHYL-PYRROLINE FR HHB
 GAMMA-MUROLENE FR ABS 4/
 MYRCENE FR ABS 4/
 MYRISTIC-ACID 700-782 FR USA
 MYRISTICIN FR 411/
 MYRTENAL FR ABS 4/
 MYRTENOL FR ABS 4/
 NEROLIDOL FR HHB
 NIACIN 9.857-14.541 FR USA
 NICKEL 0.7-2.4 FR ABS 5/
 N-NONADECANE FR ABS 4/
 N-NONANE FR ABS 4/
 CIS-OCIMENE FR ABS 4/
 OLEIC-ACID 13,700-15,309 FR USA
 OXALIC-ACID 4,000-34,000 FR WOI
 PALMITIC-ACID 12,200-13,633 FR USA
 PERILLALDEHYDE FR HHB
 L-ALPHA-PHELLANDRENE FR CCO
 PHENYLACETIC-ACID FR HHB
 PHOSPHORUS 1,638-2,040 FR USA

PHYTIN-PHOSPHORUS 1,150 FR WOI
 PHYTOSTEROLS 920-1,028 FR USA
 ALPHA-PINENE FR CCO
 BETA-PINENE FR CCO
 TRANS-PINOCARVEOL FR ABS 4/
 BETA-PINONE PL JSG
 PIPERANINE FR ABS 4/
 PIPERETTINE 2,300-8,200 FR WOI
 PIPERIDINE FR WOI
 PIPERINE 17,000-90,000 FR WOI
 PIPEROLEIN-A FR HHB
 PIPEROLEIN-B FR HHB
 PIPEROLEIN-C FR HHB
 PIPERONAL FR HHB
 PIPERONIC-ACID FR ABS 4/
 PIPERYLINE FR ABS 4/
 POTASSIUM 11,718-15,077 FR USA
 PROTEIN 108,386-123,888 FR USA
 RESIN 5,000 FR HHB
 RIBOFLAVIN 2.276-2.827 FR USA
 SABINENE FR HHB
 CIS-SABINENE-HYDRATE FR
 ABS 4/
 TRANS-SABINENE-HYDRATE FR
 ABS 4/
 SAFROLE FR 411/
 ALPHA-SANTALENE FR ABS 4/
 ALPHA-SELINENE FR HHB
 BETA-SELINENE FR HHB
 SESQUISABINENE PL JSG
 SILICA 750-3,900 FR WOI
 SODIUM 320-627 FR USA
 STARCH 280,000-490,000 FR WOI
 SULFUR 1,750-5,760 FR WOI
 1-TERPINEN-4-OL FR ABS 4/
 1-TERPINEN-5-OL FR ABS 4/
 ALPHA-TERPINENE FR ABS 4/
 GAMMA-TERPINENE FR ABS 4/
 ALPHA-TERPINEOL FR HHB
 TERPINEN-4-OL FR HHB
 ALPHA-TERPINEOL FR ABS 4/
 TERPINOLENE FR ABS 4/
 TERPINYL-ACETATE FR HHB
 THIAMIN 0.712-1.644 FR USA
 ALPHA-THUJENE FR ABS 4/
 N-TRIDECANE FR ABS 4/
 1,1,4-TRIMETHYLCYCLOHEPTA-2,4-
 DIEN-6-ONE FR ABS 4/
 4,10,10-TRIMETHYL-7-METHYLENE-
 BICYCLO-(6.2.0)DECANE-4-CAR...
 UBIQUINONE FR HHB
 2-UNDECANONE FR ABS 4/
 WATER 103,109-107,091 FR USA
 ZINC 11.2-35.7 FR USA ABS 5/

4/ Abs= Purseglove et al. Spices. Longman,
 1981. 5/ Abs=Pak. J. Sci. Ind. Res. 28:234.
 1985.

PISCIDULA PISCIPULA SARG.

"JAMAICA DOGWOOD"

CITRIC-ACID PL HHB
 DEHYDROMILLETONE PL HHB
 GALACTOSE PL HHB
 GLUCOSE PL HHB
 ICHTHYNONE 2,500 BK HHB
 ISOMILLETONE PL HHB
 JAMAICIN BK HHB
 LISETIN PL HHB
 MALIC-ACID PL HHB
 3-O-METHYL-FUKIIC-ACID PL JSG
 MILLETONE PL HHB
 MUNETONE BK HHB
 PISCERYTHRONE PL HHB
 PISCIDIA-SAPONIN PL HHB
 PISCIDIC-ACID PL HHB
 PISCIDIC-ACID-METHYL-ESTER PL JSG
 PISCIDONE PL HHB
 ROTENONE BK HHB
 BETA-SITOSTEROL PL HHB
 SUCCINIC-ACID PL HHB
 STEARIC-ACID PL HHB
 SUMATROL PL HHB
 TANNIN PL HHB

PISTACIA LENTISCUS L.

"MASTIC"

AUCUBIN SD CRC
 CHOLINE SD CRC
 CYCLOARTENOL LF HHB
 EO 10,000-30,000 LF HHB
 FAT 130,000-312,000 SD CRC HHB
 KAEMPFEROL LF HHB
 LUPEOL LF HHB
 MASTICIC-ACID RE CRC
 MASTICHIN RE CRC
 MYRICETIN LF HHB
 ALPHA-PINENE RE HHB
 PLANTEASE 0-220 SD CRC
 PROTEIN 72,000-87,000 SD CRC HHB
 QUERCETIN LF HHB
 QUINIC-ACID 48,000 LF HHB
 RHINANTHIN SD CRC
 SHIKIMIC-ACID 18,000 LF HHB
 STARCH SD CRC
 TANNIN 113,000 LF HHB
 TERPENES 4,000-8,000 LF HHB

PISTACIA VERA L.
"PISTACHIO"

ALANINE 9,940-10,340 SD USA	MANGANESE 3.2-3.4 SD FUR USA
ALUMINUM 9.0 SD FUR 1/	MERCURY 0.1 SD FUR
ANTIMONY 0.05 SD FUR	METHIONINE 3,810-3,963 SD USA
ARGININE 21,860-22,740 SD USA	MUFA 326,680-339,831 SD USA
ARSENIC 0.02 SD FUR	MYRISTIC-ACID 282-468 SD USA WOI
ASH 24,000-33,000 SD CRC USA	NIACIN 11-15 SD CRC USA
ASPARTIC-ACID 21,160-22,012 SD USA	NICKEL 1.1 SD FUR
BARIUM 0.1 SD FUR	OLEIC-ACID 319,760-389,760 SD USA
BORON 11 SD FUR	WOI
BROMINE 16 SD FUR	PALMITIC-ACID 38,540-55,643 SD USA
CADMIUM 0.04 SD FUR	WOI
CALCIUM 1,066-1,464 SD FUR USA	PALMITOLEIC-ACID 2,860-2,975 SD
CARBOHYDRATES 190,000-258,088 SD	USA
CRC USA	PECTIN 35,300 SD WOI
BETA-CAROTENE 1.38-1.46 SD CRC	PHENYLALANINE 11,840-12,317 SD USA
CESIUM 0.1 SD FUR	PHOSPHORUS 4,300-5,280 SD CRC USA
CHLORINE 408 SD FUR	PHYTOSTEROLS 1,080-1,123 SD USA
CHROMIUM 0.6 SD FUR	POTASSIUM 8,639-11,493 SD CRC FUR
COBALT 0.2 SD FUR	USA
COPPER 11-33 SD FUR USA	PROLINE 9,470-9,851 SD USA
CYANIDIN-3-O-BETA-GALACTOSIDE	PROTEIN 189,000-222,102 SD CRC USA
PL JSG	PUFA 73,160-76,105 SD USA
9,10-CYCLO-2,4-MENTHANEDIOL PL	RESIN PL WOI
JSG	RUBIDIUM 10 SD FUR
9,10-CYCLO-2,4-MENTHEN-4-OL PL JSG	SAMARIUM 0.03 SD FUR
CYSTINE 5,130-5,336 SD USA	SCANDIUM 0.004 SD FUR
EUROPIUM 0.1 SD FUR	SELENIUM 0.1 SD FUR
FAT 470,370-567,000 SD CRC USA	SERINE 13,510-14,054 SD USA
FIBER 18,800-20,000 SD CRC USA	SFA 61,270-63,737 SD USA
FLUORINE 3.8 SD FUR	SHIKIMIC-ACID LF WOI
FOLACIN 0.6 SD USA	SILICON 1,450 SD FUR
GADOLEIC-ACID 2,200-2,289 SD USA	BETA-SITOSTEROL SD HHB
GLUTAMIC-ACID 49,160-51,139 SD USA	SODIUM 54-538 SD FUR USA (NUTS
GLYCINE 10,950-11,391 SD USA	SALTED)
GOLD 0.002 SD FUR	SQUALENE SD HHB
HISTIDINE 5,360-5,576 SD USA	STEARIC-ACID 6,280-8,960 SD USA WOI
IODINE 51 SD FUR (NUTS SALTED)	STIGMASTEROL SD HHB
IRON 46-137 SD CRC FUR USA WOI	STRONTIUM 10 SD FUR
ISOLEUCINE 9,750-10,143 SD USA	SUCCINIC-ACID SD HHB
LANTHANUM 0.02 SD FUR	SUCROSE 32,600 SD HHB
LEAD 0.8 SD FUR	SULFUR 2,870 SD FUR
LEUCINE 16,770-17,445 SD USA	TANNIN PL WOI
LINOLEIC-ACID 70,220-110,880 SD USA	THORIUM 0.4 SD FUR
WOI	THREONINE 7,220-7,511 SD USA
ALPHA-LINOLENIC-ACID 2,520-2,621	TIN 0.4 SD FUR
SD USA	TITANIUM 3.1 SD FUR
LUTETIUM 0.01 SD FUR	ALPHA-TOCOPHEROL 52-54 SD USA
LYSINE 12,780-13,295 SD USA	3,11,13-TRIHIDROXYOLEANANE PL
MAGNESIUM 949-1,644 SD CRC FUR	JSG
USA	TRYPTOPHAN 2,830-2,944 SD USA
	TUNGSTEN 0.1 SD FUR
	TYROSINE 7,140-7,427 SD USA
	VALINE 14,100-14,688 SD USA
	VANADIUM 0.01 SD FUR

WATER 36,500-53,00 SD CRC USA
YTTERBIUM 0.1 SD FUR
ZINC 3-30 SD FUR 1/ USA

1/ Fur=A.K.Furr et al. 1979.

PISUM SATIVUM L.

“PEA”

ABSCISIC-ACID SD NAP
O-ACETYL-HOMOSERINE 433 SH NAP
L-(+)-ACETYLMOMOSERINE PL HHB
ALPHA-AMINO-ADIPIIC-ACID SD WOI
ALANINE 580-5,737 FR USA
ALANINE 2,400-11,353 SD USA
ALANINE 313 SH NAP
ALLANTOIN SH NAP
ALUMINUM 1-24 SD AAS
L-(+)-2-AMINOBYTYRIC-ACID PL HHB
ALPHA-AMYRIN SD NAP
BETA-AMYRIN SD NAP
ARACHIDIC-ACID SD NAP
ARGININE 1,340-13,254 FR USA
ARGININE 4,280-20,246 SD USA
ARSENIC 0.01-0.04 SD AAS
ASCORBIC-ACID 600-5,935 FR USA
ASCORBIC-ACID 44-1,892 SD NAP
USA
ASCORBIC-ACID 1,650 SP NAP
ASH 5,600-55,391 FR USA
ASH 60,000-191,000 PL CCG
ASH 8,280-43,138 SD USA
ASPARTIC-ACID 2,280-22,552 FR USA
ASPARTIC-ACID 4,950-23,415 SD USA
ASPARTIC-ACID 22 SH NAP
BETAINE 59 RT NAP
BETAINE 94 SH NAP
BIOTIN 82 SD WOI
BORON 2-23 SD AAS BOB
BROMINE 0.2-12 SD AAS
CADAVERINE LF HHB
CADMIUM 0.001-0.3 SD AAS
CAFFEIC-ACID PL PAS
CAFFEIC-ACID-4-O-BETA-D-GLU-
COSIDE FR NAP
CALCIUM 430-4,253 FR USA
CALCIUM 10,200-14,100 PL CCG
CALCIUM 230-1,700 SD AAS USA
CALCIUM-OXALATE FR NAP
CAMPESTEROL SD NAP
CARBOHYDRATES 75,600-747,774 FR
USA
CARBOHYDRATES 296,000-506,000 PL
CCG

CARBOHYDRATES 144,600-684,000 SD
USA
ALPHA-CAROTENE SD NAP
BETA-CAROTENE 0.8-8.3 FR USA
BETA-CAROTENE 3.6-18.2 SD USA
JAF37:657
CELLULOSE 74,000-96,000 SD WOI
CEPHALIN SD WOI
CHLORINE 200-590 SD WOI
S-4-CHLORO-TRYPTOPHAN SD NAP
CHOLESTEROL SD HHB
CHOLINE 2,060 FR NAP
CHOLINE 61 RT NAP
CHOLINE 1,970-2,800 SD WOI
CHOLINE 121 SH NAP
CHROMIUM 0.005-0.17 SD AAS
CITRIC-ACID SD HHB
COBALT 0.15 PL CCG
COBALT 0.002-0.24 SD AAS
COPPER 2-10 SD AAS USA
O-COUMARIC-ACID SD NAP
P-COUMARIC-ACID SD CRC(FNS)
1-O-P-COUMAROYL-BETA-D-GLUCOSE
PE NAP
COUMESTROL 300 FR NAP
COUMESTROL 0.6 SD NAP
CRYPTOXANTHIN 0.09-0.9 SD
JAF37:657
BETA-CRYPTOXANTHIN SD NAP
CYANIDIN FL HHB
CYANIDIN-3-SAMBUBIOSIDE-5-
GLUCOSIDE HU HHB
CYANIDIN-3-SOPHOROSIDE-5-GLU-
COSIDE LF HHB
CYCLOARTENOL SP NAP
CYSTINE 320-3,165 FR USA
CYSTINE 320-1,514 SD USA
DEHYDROASCORBICACID 1-7 SD WOI
DELPHINIDIN FL HHB
DELPHINIDIN-3-GLUCOSIDE FL HHB
DELPHINIDIN-3,5-DIGLUCOSIDE FL
HHB
DIHYDROFOLATE-SYNTHESASE SP
NAP
1-3-(4,5-DIHYDRO-FURANONE)-5-
(HYDROXY-METHYL)-PYRROLE-2-
CARBOXYALDEHYDE
CY NAP
(R)-DIHYDRO-MALEIMIDE 67 SH NAP
(R)-DIHYDRO-MALEIMIDE-BETA-D-
GLUCOSIDE 62 SH NAP
4,4'-DIHYDROXY-2'-METHOXY-
CHALCONE PL NAP
FAT 2,000-19,782 FR USA

FAT 15,000-54,000 PL CCG
 FAT 3,670-20,481 SD USA
 FERULIC-ACID SD HHB
 1-O-FERULOYL-BETA-D-GLUCOSE PE
 NAP
 FIBER 25,000-247,280 FR USA
 FIBER 168,000-361,000 PL CCG
 FIBER 22,100-104,541 SD USA
 FLUORINE <0.1-1 SD AAS
 FOLACIN 0.6-3 SD USA
 FOLIC-ACID 510 SD WOI
 GABA 153 SH NAP
 GENTISIC-ACID SD NAP
 GIBBERELLINS SD NAP
 5'-O-BETA-D-GLUCOPYRANOSYL-
 PYRIDOXINE SP NAP
 GLUTAMIC-ACID 4,480-44,313 FR USA
 GLUTAMIC-ACID 7,400-35,005 SD USA
 GLUTAMIC-ACID 70 SH NAP
 GLYCINE 720-7,122 FR USA
 GLYCINE 1,840-8,704 SD USA
 GLYCOLIC-ACID? SD HHB
 HENTRIACONTANE 500,000 WX HHB
 14-HENTRIACONTANOL WX HHB
 15-HENTRIACONTANOL WX HHB
 16-HENTRIACONTANOL WX HHB
 HISTAMINE SH NAP
 HISTIDINE 170-1,682 FR USA
 HISTIDINE 1,070-5,061 SD USA
 HOMOSERINE 733 SH NAP
 L-(+)-HOMOSERINE SP HHB
 L-(-)-HOMOSERINE PL HHB
 P-HYDROXYBENZOIC-ACID RT HHB
 P-HYDROXYBENZOIC-ACID SD NAP
 3-HYDROXY-2,9-
 DIMETHOXYPTEROCARPAN EM NAP
 GAMMA-HYDROXY-HOMOARGININE
 100 SP NAP
 5'-O-(6-O-(3-HYDROXY-3-METHYL-4-
 CARBOXY-BUTANOYL)-BETA-D-
 GLUCOPYRANOSYL)PYRIDOXINE 39
 SP NAP
 4-HYDROXY-2,3,9-
 TRIMETHOXYPTEROCARPAN EM NAP
 5-HYDROXYTRYPTAMINE LF NAP
 INDOLE-3-ACETIC-ACID RT(NODULES)
 NAP
 INDOLYL-3-ACETALDEHYDE PL HHB
 INOSITOL 1,500 SD WOI
 IODINE 0.009 SD WOI
 IRON 21-206 FR USA
 IRON 400 PL CCG
 IRON 14-90 SD AAS USA
 ISOLEUCINE 1,610-15,925 FR USA
 ISOLEUCINE 1,950-9,224 SD USA
 ISOXAZOLIN-5-ONE-2-BETA-D-
 GLUCOSIDE SP NAP
 JASMONIC-ACID FR NAP
 KAEMPFEROL 500 TC NAP
 KAEMPFEROL-3-COUMAROYL-
 TRIGLUCOSIDE) LF HHB
 KAEMPFEROL-3-FERULOYL-
 TRIGLUCOSIDE LF HHB
 KAEMPFEROL-3-TRIGLUCOSIDE LF
 HHB
 KILOCALORIES 420-4,154 FR USA
 KILOCALORIES 810-3,832 SD USA
 LEAD 0-0.5 SD AAS
 LECITHIN SD HHB
 LEGUMIN SD HHB
 LEGUMINELIN SD HHB
 LEUCINE 2,280-22,552 FR USA
 LEUCINE 3,230-15,279 SD USA
 LEUCINE 35 SH NAP
 LINOLEIC-ACID 1,750-7,418 FR USA
 LINOLEIC-ACID 1,520-7,190 SD USA
 ALPHA-LINOLENIC-ACID 130-1,286 FR
 USA
 ALPHA-LINOLENIC-ACID 350-1,656 SD
 USA
 LUPEOL SP NAP
 LUTEIN + ZEAXANTHIN 17-170 SD
 JAF37:657
 LUTEIN-EPOXIDE LF HHB
 LYSINE 2,020-19,980 FR USA
 LYSINE 3,170-14,995 SD USA
 MAGNESIUM 218-2,591 FR USA
 MAGNESIUM 2,200-3,700 PL CCG
 MAGNESIUM 319-1,700 SD AAS USA
 MALIC-ACID SD HHB
 5'-O-(6-O-MALONYL-BETA-D-
 GLUCOPYRANOSYL)-PYRIDOXINE SP
 NAP
 MALVIDIN-3-RHAMNOSIDE-5-GLU-
 COSIDE FL NAP
 MANGANESE 85 PL CCG
 MANGANESE 3-21 SD AAS USA
 MERCURY 0.0005-0.024 SD AAS
 MESOXALIC-ACID SP NAP
 METHIONINE 110-1,088 FR USA
 METHIONINE 820-3,879 SD USA
 METHYL-4-CHLORO-INDOYL-3-
 ACETATE SD NAP
 24-METHYLENE-CHOLESTEROL SD
 NAP
 MEVALONIC-ACID 2 SN NAP
 MOLYBDENUM 0.1-3 SD AAS
 MUFA 210-2,077 FR USA

- MUFA 350-1,656 SD USA
 MYOINOSITOL 100 RT(NODULES) NAP
 MYOINOSITOL 1,000 SD NAP
 MYRISTIC-ACID 20-198 FR USA
 NEO-BETA-CAROTENE-B SD WOI
 NEO-BETA-CAROTENE-U SD WOI
 NIACIN 6-59 FR USA
 NIACIN 20-105 SD USA
 NICKEL 0.2-3 SD AAS
 NICOTINAMIDE 0.7 SP NAP
 NICOTINIC-ACID 18 SD NAP
 NICOTINIC-ACID 18 SP NAP
 NITROGEN 11,000-50,000 SD AAS
 OBTUSTYRENE PL NAP
 OLEIC-ACID 210-2,077 FR USA
 OLEIC-ACID 350-1,656 SD USA
 ONONITOL 3.23 RT(NODULE) NAP
 OXALIC-ACID 60 FR WBB
 PAEONIDIN FL HHB
 PALMITIC-ACID 330-3,264 FR USA
 PALMITIC-ACID 640-3,027 SD USA
 PALMITOLEIC-ACID 0 FR USA
 PANTOTHENIC-ACID 7.5-74 FR USA
 PANTOTHENIC-ACID 1-5 SD USA
 PARAGALACTAN SD HHB
 PECTIN 25,000 SD WOI
 PELARGONIDIN FL HHB
 PETUNIDIN FL HHB
 PHENYLALANINE 900-8,902 FR USA
 PHENYLALANINE 2,000-9,460 SD USA
 PHOSPHORUS 530-5,240 FR USA
 PHOSPHORUS 1,800-6,400 PL CCG
 PHOSPHORUS 1,038-6,250 SD AAS USA
 PHYTIC-ACID SD HHB
 PHYTOHEMAGGLUTININ SD NAP
 PHYTOPRECIPITIN SD NAP
 PINITOL 500 SD NAP
 PIPECOLINIC-ACID PL HHB
 PISATIN SP NAP
 POTASSIUM 1,701-22,737 FR USA
 POTASSIUM 12,800-25,200 PL CCG
 POTASSIUM 2,273-15,830 SD AAS USA
 PROLINE 630-6,231 FR USA
 PROLINE 575 RT USA
 PROLINE 1,730-8,183 SD USA
 PROLINE 23 SH USA
 PROTEIN 28,000-276,954 FR USA
 PROTEIN 107,000-284,000 PL CCG
 PROTEIN 52,800-262,042 SD USA
 PUFA 890-8,803 FR USA
 PUFA 1,870-8,846 SD USA
 PUTRESCINE LF HHB
 PYRIDOXINE 1.4 SD WOI
 PYRROLINE SP NAP
 QUERCETIN-3-COUMAROYL-
 TRIGLUCOSIDE) LF NAP
 QUERCETIN-3-FERULOYL-
 TRIGLUCOSIDE) LF NAP
 QUERCETIN-3-TRIGLUCOSIDE LF HHB
 QUERCITRIN SD WOI
 QUINIC-ACID SD NAP
 RAFFINOSE 6,000 SD NAP
 RIBOFLAVIN 0.8-8 FR USA
 RIBOFLAVIN 1.2-6.7 SD USA
 RUBIDIUM 0.77-10 SD AAS
 SALICYLIC-ACID PL PAS
 SELENIUM 0.001-0.002 SD AAS
 SERINE 1,250-12,364 FR USA
 SERINE 1,810-8,562 SD USA
 SFA 390-3,857 FR USA
 SFA 710-3,350 SD USA
 SILICON 2-59 SD AAS
 CIS-SINAPIC-ACID SD USA
 TRANS-SINAPIC-ACID SD USA
 1-O-SINAPOYL-BETA-D-GLUCOSE PE
 NAP
 BETA-SITOSTEROL SD NAP
 SODIUM 22-578 FR USA
 SODIUM 37-297 SD USA
 SOYASAPONIN-I SD NAP
 SPERMINE LF HHB
 SPERMIDINE LF HHB
 SQUALENE SP NAP
 STACHYOSE 20,000 SD HHB NAP
 STARCH 329,000-434,000 SD WOI
 STEARIC-ACID 30-297 FR USA
 STEARIC-ACID 70-331 SD USA
 STIGMASTEROL SD NAP
 SUCCINIC-ACID SD HHB
 SUCROSE 22,500-280,000 SD HHB NAP
 SUGAR 41,000-59,000 SD WOI
 SULFUR 2,300 PL CCG
 SULFUR 410-2,290 SD AAS WOI
 SYRINGIC-ACID SD CRC(FNS) RT HHB
 THIAMIN 1.5-15 FR USA
 THIAMIN 2.4-13.9 SD USA
 THREONINE 990-9,792 FR USA
 L-THREO-ALPHA-AMINO-BETA-
 CHLORO-BUTYRIC-ACID JU NAP
 THREONINE 2,030-9,603 SD USA
 TOCOPHEROL 0.3-22 SD TOT WOI
 TRIGONELLINE 9-88 LF NAP
 TRIGONELLINE 6-203 FR NAP
 TRIGONELLINE 1-75 RT NAP
 TRIGONELLINE 128-227 SD NAP
 TRIGONELLINE 55 SH NAP
 TRIGONELLINE 91 SP NAP
 TRIGONELLINE 1-24 ST NAP

2,3,9-TRIMETHOXYPTEROCARPAN EM
NAP

TRYPTOPHAN 270-2,671 FR USA

TRYPTOPHAN 370-1,750 SD USA

TYRAMINE LF RT HHB

TYROSINE 990-9,792 FR USA

TYROSINE 1,130-5,345 SD USA

VALINE 2,730-27,003 FR USA

VALINE 2,350-11,116 SD USA

VALINE 33 SH NAP

VANILLIC-ACID SD CRC(FNS) RT HHB

VERBASCOSIDE 31,000 SD NAP

VICILIN SD HHB

VIT-B6 1.6-16 FR USA

VIT-B6 1.6-8.6 SD USA

VIT-B12 0.0036 SD WOI

WATER 880,000-897,750 FR USA

WATER 760,000-793,670 SD AAS USA

XANTHOPHYLL SD WOI

XENOGENOSIN PL NAP

M-XYLOHYDROQUINONE SD WOI

ZINC 11-60 SD AAS USA

AAS=ACTA AGRIC SCAND SUPPL

22:1980 H20=76% ZMB=4.17 X APB

PLANTAGO ASIATICA L.

“ASIAN PLANTAIN”

ADENINE PL CCO

L-ARABINOSE SD HHB

ARSENIC 1.71 PL CAL

AUCUBIN PL SD CCO

CALCIUM 18,000 PL CAL

CARVACROL FL LF RT CCO

CHOLINE PL CCO

COPPER 14 PL CAL

FAT 81,000 SD WOI

D-GALACTOSE SD HHB

D-GALACTURONIC-ACID SD HHB

N-HENTRIACONTANE PL CCO

HOMOPLANTAGININ PL CCO

IRON 890 PL CAL

LINALOOL FL LF RT CCO

LINOLEIC-ACID SD CCO

MAGNESIUM 5,320 PL CAL

MANGANESE 74 PL CAL

MERCURY 0.1 PL CAL

MUCILAGE SD CCO

1-OCT-3-OL FL LF RT CCO

OLEIC-ACID SD CCO

PALMITIC-ACID SD CCO

PLANTAGININ PL CCO

PLANTASAN SD HHB

PLANTENOLIC-ACID PL WOI

POTASSIUM 19,600 PL CAL

L-RHAMNOSE SD HHB

BETA-SITOSTEROL PL CCO

BETA-SITOSTEROL-PALMITATE PL
CCO

SODIUM 950 PL CAL

STEARIC-ACID SD CCO

STIGMASTEREOL-PALMITATE PL CCO

SUCCINIC-ACID PL CCO

URSOLIC-ACID PL HHB

D-XYLOSE SD HHB

ZINC 31 PL CAL

AAS=ACTA AGRIC SCAND SUPPL

22:1908 H20=76% ZMB=4.17 X APB

PLANTAGO MAJOR L.

“COMMON PLANTAIN”

ACETOSIDE

ADENINE

ALKALOIDS 1,000 PL WOI

ALLANTOIN

APIGENIN LF 411/

APIGENIN-7-GLUCOSIDE LF 411/

ASCORBIC-ACID

ASPERULOSIDE 2 FL JNP47:

AUCUBIN SD JFM 411/

AUCUBIN 3,700 PL HHB

AUCUBIN 10,000 LF WOI

BAICALEIN LF 411/

BAICALIN

BENZOIC-ACID LF 411/

CAFFEIC-ACID PL JLS58:159

CATALPOL LF 411/

CHLOROGENIC-ACID JFM

CHOLINE SD CCO

CINNAMIC-ACID

CITRIC-ACID

P-COUMARIC-ACID PL JLS58:159

3,4-DIHYDROAUCUBIN LF 411/

DI-O-METHYLGALACTOSE

EMULSIN JFM

EO 2,000 PL HHB

FAT 100,000-220,800 SD JFM

FERULIC-ACID PL

FIBER 190,000 SD HHB

L-FRUCTOSE

FUMARIC-ACID LF 411/

GENIPOSIDIC-ACID

GENTISIC-ACID PL HHB

GLUCORAPHENINE

D-GLUCOSE

6'-O-BETA-GLUCOSYLAUCUBIN LF 411/
 HISPIDULIN LF 411/
 P-HYDROXYBENZOIC-ACID
 HYDROXYCINNAMIC-ACID LF 411/
 9-HYDROXY-CIS-11-OCTADECANOIC-
 ACID SD
 INDICAINE
 INVERTIN JFM
 LIGNOCERIC-ACID
 LINOLEIC-ACID 25,000-50,000 SD HHB
 LINOLENIC-ACID 900-1,800 SD HHB
 LOLIOLID
 LUTEOLIN LF 411/
 LUTEOLIN-7-O-BETA-D-GLUCOSIDE PL
 JSG
 LUTEOLIN-7-O-BETA-D-GLUCURONIDE
 PL JSG
 MUCILAGE
 NEOCHLOROGENIC-ACID LF 411/
 NEPETIN LF 411/
 OLEANOLIC-ACID LF 411/
 OLEIC-ACID 37,000-74,000 SD HHB
 PHENOLCARBONIC-ACIDS
 PLANTAGIC-ACIS
 PLANTAGONINE 500 PL HHB
 PLANTAGOSIDE LF 411/
 PLANTEASE 0-220 SD JFM
 PLANTEOLIC-ACID
 POTASSIUM-SALTS 4,600 PL JFM
 PROTEIN 188,000 SD HHB
 RESIN
 RHAMNOSE
 SALICYLIC-ACID 1 PL HHB
 SACCHAROSE
 SCUTELLARIN LF 411/
 SITOSTEROL
 SORBITOL 15,000 PL HHB
 SUCCINIC-ACID
 SYRINGIC-ACID
 SULFORAPHENE
 SYRINGIN
 TANNIN 40,000-57,000 PL HHB WOI
 TYROSOL JFM (=TYROSINE)
 URSOLIC-ACID
 VANILLIC-ACID
 D-XYLOSE

PLANTAGO OVATA FORSK.

"BLOND PSYLLIUM; ISPAGHULA;
 SPOGEL SEEDS"

DL-ALANINE SD
 ALSOBIURONIC-ACID SD HHB WOI
 L-ARABINOSE (14%) SD

L-ASPARAGINE SD
 AUCUBIN SD
 BEHENIC-ACID 1,300 SD
 L-CYSTINE SD
 FAT 50,000-51,000 SD RIZ HHB
 FRUCTOSE SD
 GALACTOSE SD
 D-GALACTURONIC-ACID
 GLUCOSE SD
 INDICAMINE PL HHB
 LIGNOCERIC-ACID 400 SD JFM
 LINOLEIC-ACID 13,000-24,375 SE HHB
 RIZ
 LINOLENIC-ACID 511-1,500 SD HHB RIZ
 L-LYSINE SD
 4-O-METHYLGLUCURONIC-ACID
 MUCILAGE 300,000 SD WOI
 MYRISTIC-ACID 1,300 SD
 DL-NORLEUCINE SD
 OLEIC-ACID 8,000-19,470 SD HHB RIZ
 PALMITIC-ACID 1,300-5,500 SD HHB
 PLANTEOSE SD
 L-RHAMNOSE SD
 RHAMNOSE (7%) SD HHB
 STEARIC-ACID 1,300-3,450 SD JFM
 STEROL
 SUCROSE
 TANNIN
 TYROSINE SD
 URONIC-ACID SD
 DL-VALINE
 VALINE
 D-XYLOSE
 XYLOSE (46-80%) SD HHB

PLANTAGO PSYLLIUM L.

"PSYLLIUM"

ALUMINUM 34 SD PED 1/
 ASCORBIC-ACID 0 SD PED
 ASH 19,800 HU WOI
 ASH 22,000 SD PED
 AUCUBIN SD PED
 BUTYRIC-ACID 303-574 SD PED WOI
 CALCIUM 3,059 HU WOI
 CALCIUM 3,340 SD PED
 CARBOHYDRATES 845,500 HU WOI
 CARBOHYDRATES 926,000 SD PED
 BETA-CAROTENE 24 HU WOI
 BETA-CAROTENE 24 SD PED
 CHROMIUM 8 SD PED
 COBALT 25 SD PED
 FAT 34,000 HU WOI
 FAT 37,000-70,000 SD PED WOI

FIBER 3,500 HU WOI
 FIBER 3,000 SD PED 2/
 INDICAIN SD PED
 INVERTASE SD WOI
 IRON 183 HU WOI
 IRON 200 SD PED
 KILOCALORIES 2,350 SD PED
 LINOLEIC-ACID SD PED
 MAGNESIUM 510 SD PED
 MANGANESE 16 SD PED
 MUCIC-ACID SD WOI
 MUCILAGE 100,000-120,000 (-300,000)
 SD (PED) WOI
 NIACIN 0 SD PED
 OLEIC-ACID 1,865-3,528 SD PED WOI
 OXALIC-ACID SD WOI
 PALMITIC-ACID SD PED
 PHOSPHORUS 578 HU WOI
 PHOSPHORUS 630 SD PED
 PLANTAGONINE SD PED
 PLANTARENALOSIDE PL JSG
 POTASSIUM 8,110 SD PED
 PROTEIN 14,000 HU WOI
 PROTEIN 15,000 SD PED
 RIBOFLAVIN 0 SD PED
 SELENIUM 14 SD PED
 SILICON TR SD PED
 BETA-SITOSTEROL SD PED
 SODIUM 540 SD PED
 STEARIC-ACID SD PED
 STIGMASTEROL SD PED
 TANNIN PL PED
 THIAMIN 0 SD PED
 TIN 21 SD PED
 WATER 83,000 HU WOI (I BELIEVE
 WOI, NOT PED)
 WATER 782,000 SD PED 3/
 ZINC 21 SD PED

1/PED=Pedersen assigned psyllium to
 P. psyllium though it is usually treated as
 P. ovata. He may be talking husk instead of
 seed.

PLATYCODON GRANDIFLORUM
 (JACQ.) A.DC.

“JIE-GENG; CHIEH-KENG;
 BALLOON FLOWER”

ARABINOSE RT HHB
 ARSENIC 0.29 RT CAL
 ASCORBIC-ACID 0 RT CRC
 ASH 15,000-20,000 RT CRC
 BETULIN RT CCO

CALCIUM 180-5240 RT CAL CRC SMO
 CARBOHYDRATES 710,000-937,000 RT
 CRC
 BETA-CAROTENE 0 RT CRC
 COPPER 6-10 RT CAL SMO
 DEAPIOPLATYCODIN-D RT CCO
 DEAPIOPLATYCODIN-D-3 RT CCO
 FAT 9,000-12,000 RT CRC
 FIBER 89,000-117,000 RT CRC
 GLUCOSE RT HHB
 3-O-BETA-GLUCOSYLPLATY-
 CODIGENIN RT CCO
 INULIN RT CCO
 IRON 62-200 RT CAL CRC SMO
 KILOCALORIES 2,870-3,790 RT CRC
 MAGNESIUM 1,250-1,510 RT CAL SMO
 MANGANESE 24-30 RT CAL SMO
 2-METHOXYMETHYL-PLATYCONATE-A
 pL JSG
 NIACIN 78-103 RT CRC
 PHOSPHORUS 1,890-2,493 RT CRC
 PLATYCODIGENIN RT HHB
 PLATYCODIN 20,000 RT WOI
 PLATYCODIN-A RT CCO
 PLATYCODIN-C RT CCO
 PLATYCODIN-D RT CCO
 PLATYCODIN-D-2 RT CCO
 PLATYCODIN-D-3 RT CCO
 PLATYCODONIN RT CCO
 PLATYCODOSIDE-C RT CCO
 PLATYCOGENIC-ACID-A RT CCO
 PLATYCOGENIC-ACID-B RT CCO
 PLATYCOGENIC-ACID-C RT CCO
 PLATYCONIC-ACID-A RT CCO
 PLATYCONIN RT CCO
 POLYGALACIC-ACID RT CCO
 POLYGALACIN-D RT CCO
 POLYGALACIN-D-2 RT CCO
 POTASSIUM 4,520-6,660 RT CAL SMO
 PROTEIN 24,000-32,000 RT CRC
 RHAMNOSE RT CCO
 RIBOFLAVIN 3.9-4.7 RT CRC
 SAPONINS 20,000 RT CCO
 SODIUM 243-472 RT CAL SMO
 ALPHA-SPINASTEROL RT CCO
 ALPHA-SPINASTEROL-GLUCOSIDE RT
 CCO
 ALPHA-SPINASTERYL-BETA-D-
 GLUCOPYRANOSIDE RT CCO
 STIGMAST-7-ENOL RT CCO
 THIAMIN 1-1.3 RT CRC
 WATER 242,000 RT CRC
 XYLOSE RT CCO
 ZINC 13-18 RT CAL SMO

PLUMERIA ACUTIFOLIA POIR.

"FRANGIPANI"

ACETYL-LUPEOL LX WOI
 ALPHA-AMYRIN LX HHB
 BETA-AMYRIN LX HHB
 L-(+)-BORNESITOL FL HHB
 CAOUTCHOUC LX HHB
 CEROTIC-ACID LX WOI
 CITRONELLOL FL HHB
 BETA-DIHYDROPLUMERICIC-ACID
 RT HHB
 BETA-DIHYDROPLUMERICINE RT HHB
 FARNESOL FL HHB
 FULVOPLUMIERIN 1,000-2,500 BK HHB
 GERANIOL FL HHB
 IRIDIODS ST RAA
 ISOPLUMERICINE RT HHB
 KAEMPFEROL FL HHB
 KAEMPFEROL-GLYCOSIDE FL HHB
 LINALOOL FL HHB
 LUPEOL LX HHB
 LUPEOL-ACETATE LX HHB
 OXYMETHYLDIOXYCINNAMIC-ACID
 LX HHB
 PECTIN 56,000 LF WOI
 PHENYLETHYL-ALCOHOL FL HHB
 PLUMERICINE RT HHB
 PLUMIERIC-ACID LX WOI
 PLUMIERIDE 9,600-60,000 BK HHB JFM
 QUERCETIN FL HHB
 QUERCETIN-GLYCOSIDE FL HHB
 QUERCITRIN PL RAA
 RUTIN PL RAA
 BETA-SITOSTEROL BK HHB
 INCLUDES *P. RUBRA*

PODOPHYLLUM PELTATUM L.

"MAYAPPLE"

ASTRAGALIN
 BERBERINE USDA TB-1234
 CALCIUM-OXALATE
 DEHYDROPODOPHYLLOTOXIN RT
 HHB
 4'-DEMETHYLPDOPHYLLOTOXIN RH
 HHB
 4'-DEMETHYLPDOPHYLLOTOXIN-
 GLUCOSIDE RH HHB
 4'-DEMETHYLDESXYPODOPHYLLUM-
 BETA-D-GLUCOSIDE RH HHB
 DESXYPODOPHYLLOTOXIN 1,000 RT
 GALLIC-ACID

ISORHAMNETIN
 KAEMPFEROL RH HHB
 KAEMPFEROL-3-GLUCOSIDE RH HHB
 LIGNAN-K
 LIGNAN-M
 METHYLPDOPHYLLOQUERCETIN RT
 HHB
 ALPHA-PELTATIN 3,500-6,000 RH
 ALPHAPELTATIN-GLUCOSIDE
 BETA-PELTATIN 1,750-3000 RH
 BETA-PELTATIN-GLUCOSIDE RH HHB
 PICROPODOPHYLLIN RH HHB
 PODOPHYLLIC-ACID RH HHB
 PODOPHYLLIN RH HHB
 PODOPHYLLOTOXIN 7,000-12,000 RH
 PODOPHYLLOTOXIN-O-BETA-D-
 GLUCOSIDE PL JSG
 PODORHIZOL-BETA-D-GLUCOSIDE
 QUERCETIN 50,000 RE PAM
 QUERCETIN-3-GALACTOSIDE
 RESIN 30,000-60,000

POGOSTEMON CABLIN

(BLANCO) BENTH.

"PATCHOULI"

APIGENIN PL CCO
 APIGENIN-7-O-BETA-GLUCOSIDE PL
 CCO
 APIGENIN-7-O-BETA-D-(-6"-P-
 COUMAROYL)-GLUCOSIDE PL CCO
 AZULENE PL HHB
 BENZALDEHYDE PL HHB
 ALPHA-BULNESENE PL WOI
 ALPHA-BULNESENE-OXIDE PL BML
 BULNESOL PL AYL
 ALPHA-BULNESONE 1,260-5,460 PL
 HHB
 CADINENE PL HHB
 CAMPHENE PL HHB
 CARYOPHYLLENE PL HHB
 CARYOPHYLLENE-OXIDE PL BML
 CINNAMALDEHYDE PL HHB
 O-CRESOL LF CCO
 CYCLOSEYCHELLENE PL AYL
 DEHYDRACETIC-ACID LF CCO
 DHELWANGIN 2,500 HHB
 DIMETHYLPHENOL LF CCO
 BETA-ELEMENE PL HHB
 EO 15,000-58,000 PL HHB WOI
 EPIGUAIPYRIDINE PL AYL
 1,10-EPOXY-ALPHABULNESENE PL
 HHB

EPOXYCARYOPHYLLENE PL AYL
 1-ALPHA,5-ALPHA-EPOXY-ALPHA-
 GUAIENE PL AYL
 1-BETA,5-BETA-EPOXY-ALPHA-
 GUAIENE PL HHB
 EUGENOL PL HHB
 GUAIACOL LF CCO
 ALPHA-GUAIENE 1,261-5,460 PL HHB
 WOI
 ALPHA-GUAIENE-OXIDE PL BML
 GUAIPYRIDINE PL AYL
 HEPTANOIC-ACID LF CCO
 HUMULENE PL HHB
 LIMONENE PL HHB
 2-METHYLBUTYRIC-ACID LF CCO
 2-METHYLHEXANOIC-ACID LF CCO
 4-METHYLPENTANOIC-ACID LF CCO
 NONANOIC-ACID LF CCO
 NORDEHYDROPATCHOULOL PL HHB
 NORPATCHOULENOL PL AYL
 OCTANOIC-ACID LF CCO
 OMBUINE PL CCO
 PACHYPODOL PL CCO
 ALPHA-PATCHOULENE PL HHB
 BETA-PATCHOULENE 120-464 PL HHB
 GAMMA-PATCHOULENE PL HHB
 PATCHOULI-ALCOHOL 2,100-23,200 PL
 AYL HHB
 PATCHOULIPYRIDINE PL AYL
 PENTANOIC-ACID LF CCO
 CIS-2-PENTYLCYCLOPROPYL-
 CARBOXYLIC-ACID LF CCO
 TRANS-2-PENTYLCYCLOPROPYL
 CARBOXYLIC-ACID LF CCO
 PHENOL LF CCO
 ALPHA-PINENE PL HHB
 BETA-PINENE PL HHB
 POGOSTOL PL AYL
 POGOSTONE PL AYL
 RHAMNETIN PL CCO
 SEYCHELLENE PL HHB
 TANNIN 17,000 PL HHB
 P-VINYLPHENOL LF CCO

POLIANTHES TUBEROSA L.

“TUBEROSE”

BENZYL-ALCOHOL FL WOI
 BENZYL-BENZOATE FL WOI
 5-(1-BUTENYL)-DIHYDRO-2(3H)-
 FURANONE PL JSG
 BUTYRIC-ACID FL WOI
 9(11)-DEHYDROHECOGENIN PL JSG
 EO 800-15,000 FL GEO WOI

EUGENOL FL WOI
 FARNESOL FL WOI
 FRUCTOSAN 70,000 BU WOI
 GERANIOL FL WOI
 GERANYL-ACETATE FL WOI
 HECOGENIN BU WOI
 5-(2-HEXENYL)-DIHYDRO-2(3H)-
 FURANONE PL JSG
 LYCORINE BU WOI
 METHYL-ANTHRANILATE FL WOI
 METHYL-BENZOATE FL GEO
 METHYL-SALICYLATE FL WOI
 METHYL-VANILLIN FL WOI
 NEROL FL WOI
 NERYL-ACETATE FL WOI
 PHENYLACETIC-ACID FL WOI
 PIPERONAL FL WOI
 TIGOGENIN BU WOI

POLYGALA SENEGA L.

“SENECA SNAKEROOT”

“SENEGA”

1,5-ANHYDRO-(O-ALPHA-D-
 GALACTOPYRANOSYL-{1-2})-O-
 ALPHA-D-GALACTOPYRANOSYL-
 {1-2})-D-GLUCITOL RT CCO
 ARABINOSE RT HHB
 ARABINOSYL-ALPHA-D-GALACTOSYL-
 D-GLUCOSE RT CCO
 P-COUMARIC-ACID RT HHB
 CYCLOSENEGIN RT HHB
 3,4-DIMETHOXYCINNAMIC-ACID RT
 HHB
 FERULIC-ACID RT HHB
 FUCOSE RT HHB
 2-O-ALPHA-D-GALACTOPYRANOSYL-
 1,5-ANHYDRO-D-GLUCITOL RT CCO
 GALACTOSE RT HHB
 6-O-BETA-D-GLUCOPYRANOSYL-1,5-
 ANHYDRO-D-GLUCITOL RT CCO
 GLUCOSE RT HHB
 HYDROXYSENEGIN RT HHB
 MANNINOTRIOSE RT CCO
 MANNOSE RT HHB
 P-METHOXYCINNAMIC-ACID RT HHB
 METHYL-SALICYLATE 1,000 RT HHB
 MONOTROPITOSIDE RT HHB
 PECTIN RT HHB
 POLYGALIC-ACID RT HHB
 POLYGALITOL 12,000 RT HHB
 PRESENEGIN RT HHB
 RAFFINOSE RT HHB
 RHAMNOSE RT HHB

RIBOSE RT HHB
 SALICYLIC-ACID-METHYLK-ESTER-
 PRIMVEROSIDE RT HHB
 SAPONINS 20,000-100,000 RT HHB
 SENEAGENIN RT HHB
 SENEGIN RT HHB
 SENEAGENIC-ACID PL JSG
 SINAPIC-ACID RT HHB
 ALPHA-SPINASTEROL RT HHB
 STACHYOSE RT HHB
 TENUIFOLIN RT HHB
 TENUIFOLIC-ACID RT HHB
 TENUIGENIN RT HHB
 3,4,5-TRIMETHOXYCINNAMIC-ACID RT
 HHB
 VALERIANIC-ACID RT HHB
 XYLOSE RT HHB

POLYGALA TENUIFOLIA WILLD.

“CHINESE SENEGA”

N-ACETYL-D-GLUCOSAMINE RT CCO
 BETA-AMYRIN RT CCO
 1,5-ANHYDRO-D-SORBITOL RT CCO
 ARSENIC 0.12 RT CAL 1/
 CALCIUM 3,420 RT CAL
 COPPER 8-9 RT CAL
 3-HYDROXY-2,6,7,8-
 TETRAMETHOXYXANTHONE RT CCO
 6-HYDROXY-1,2,3,7-
 TETRAMETHOXYXANTHONE RT CCO
 IRON 290 RT CAL
 MAGNESIUM 960 RT CAL
 MANGANESE 24 RT CAL
 ONJISAPONIN-A RT CCO
 ONJISAPONIN-B RT CCO
 ONJISAPONIN-C RT CCO
 ONJISAPONIN-D RT CCO
 ONJISAPONIN-E RT CCO
 ONJISAPONIN-F RT CCO
 ONJISAPONIN-G RT CCO
 1,2,3,6,7-PENTAMETHOXYXANTHONE
 RT CCO
 2,3,6,7,8-PENTAMETHOXYXANTHONE
 RT CCO
 POLYGALITOL RT CCO
 POTASSIUM 2,900 RT CAL
 PRESENEGENIN RT HHB 2/
 PRESENEGENIN-BETA-D-
 GLUCOPYRANOSIDE RT CCO
 RESIN RT CCO
 SODIUM 247 RT CAL
 SAPONIN 40,000 RT CCO

SENEGENIN RT HHB 2/
 TENUIDIN RT HHB 2/
 TENUIFOLIN PL JSG
 1,2,3,7-TETRAMETHOXYXANTHONE PL
 JSG
 3,4,5-TRIMETHOXYCINNAMIC-ACID RT
 CCO
 ZINC 12 RT CAL

1/ The CAL mineral data might as properly
 assigned to *P.sibirica*. 2/HHB treats the
 species as synonyms.

POLYGONUM AVICULARE L.

“PROSTRATE KNOTWEED”

AVICULARIN PL CRC
 CALCIUM-OXALATE PL CRC
 CATECHIN PL CRC
 DELPHINIDIN PL CRC
 HYPERIN PL CRC
 MYRICETIN PL CRC
 OXYMETHYLANTHRAQUINONE 1,500
 LF CRC
 OXYMETHYLANTHRAQUINONE 3,500
 RT CRC
 OXYMETHYLANTHRAQUINONE 2,000
 ST CRC
 POLYGONIC-ACID PL CRC
 QUERCETIN PL CRC
 QUERCETIN-3-ARABINOSIDE PL CRC
 QUERCITRIN PL CRC
 RUTIN PL CRC
 SALICYLIC-ACID PL CRC
 TANNIC-ACID PL CRC

POLYGONUM CUSPIDATUM

SIEBOLD & ZUCC.

“JAPANESE KNOTWEED”

ARSENIC ND PL CPB38:2205
 BARIUM 14-32 PL CPB38:2205
 BROMINE 11-80 PL CPB38:2205
 CALCIUM 11,000-12,000 PL CPB38:2205
 CHLORINE 4,000-6,000 PL CPB38:2205
 CHROMIUM 8-14 PL CPB38:2205
 CHRYSOPHANOL RT HHB
 COPPER 9-10 PL CPB38:2205
 EMODIN 6,700 RT HHB
 EMODIN-8-BETA-D-GLUCOSIDE RT
 HHB
 IODINE ND PL CPB38:2205
 IRON 360-1,300 PL CPB38:2205

ISOQUERCITRIN PL HHB
 LEAD ND PL CPB38:2205
 MANGANESE 59-330 PL CPB38:2205
 MOLYBDENUM ND PL CPB38:2205
 NICKEL ND PL CPB38:2205
 PHOSPHORUS 2,300-2,800 PL
 CPB38:2205
 PHYSCION-8-BETA-D-GLUCOSIDE RT
 HHB
 PICEID RT HHB
 PLASTOQUINONE-B LF HHB
 PLASTOQUINONE-C LF HHB
 POLYDATIN PL HHB
 POLYDATOSIDE RT HHB
 POLYGONIN RT HHB
 POTASSIUM 18,700-22,000 PL
 CPB38:2205
 QUERCITRIN PL HHB
 RESVERATROL RT HHB
 RESVERATROL-3-MONOGLUCOSIDE
 RT HHB
 REYNOUTRIIN 3,000 LF HHB
 RUBIDIUM 8-33 PL CPB38:2205
 RUTIN PL HHB
 STRONTIUM 15-120 PL CPB38:2205
 SULFUR 2,300-2,600 PL CPB38:2205
 TANNIN 170,000-240,000 LF HHB
 TANNIN 30,000-130,000 ST HHB
 TITANIUM 30-90 PL CPB38:2205
 ZINC 42-49 PL CPB38:2205

POLYGONUM HYDROPIPER L.

“COMMON SMARTWEED”

ACETIC-ACID PL HHB
 BALDRIANIC-ACID PL HHB
 BORNEOL (3.62%EO) HHB
 BORNYL-ACETATE (1.23%EO) HHB
 CAMPHOR (1.23%EO) HHB
 CAPRIONIC-ACID PL HHB
 CARVONE (4.35%EO) HHB
 1,4-CINEOLE (1.9%EO) HHB
 CINNAMIC-ACID-METHYL-ESTER
 (2.84%EO) HHB
 CINNAMIC-ALCOHOL (5.44%EO) HHB
 CONFERTIFOLIN SD 411/
 CONFERTIFLORIN PL HHB
 P-CYMOL (2.39%EO) HHB
 ELLAGIC-ACID
 FENCHONE (1.81%EO) HHB
 FORMIC-ACID PL HHB
 FRUCTOSE PL HHB
 GALLIC-ACID PL HHB

GLUCOSE PL HHB
 ISODRIMENINOL SD 411/
 ISODRIMENOL PL JSG
 ISOPOLYGODIAL SD 411/
 ISORHAMNETIN PL 411/
 ISOTADEONAL PL HHB
 KAEMPFEROL PL 411/
 MALIC-ACID PL HHB
 MELISSIC-ACID PL HHB
 MUCILAGE PL HHB
 PERSICARIN
 PERSICARIN-7-METHYL-ETHER PL
 HHB
 PHELLANDRENE (1.38%EO) HHB
 ALPHA-PINENE (5.26%EO) HHB
 BETA-PINENE (2.64%EO) HHB
 POLYGODIAL LF HHB 411/
 POLYGONAL SD 411/
 POLIGONONE EO HHB
 POLYGONOLIDE PL 411/
 POTASSIUM-CHLORIDE 26,000 PL
 HHB
 POTASSIUM-NITRATE PL HHB
 QUERCETIN PL HHB
 QUERCETIN-7-GLUCOSIDE PL HHB
 QUERCITRIN PL HHB
 RHAMNAZIN 1,100 PL HHB
 RHAMNESIN PL 411/
 RUTIN 25,000-30,000 LF HHB
 SITOSTEROL PL HHB
 BETA-SITOSTEROL-GLUCOSIDE PL
 HHB
 TANNIC-ACID PL HHB
 TANNIN 35,000 PL HHB
 TERPINEOL (0.76%EO) HHB
 VALERIANIC-ACID PL HHB

*POLYGONUM
 HYDROPIPEROIDES L.*

“MILD WATER PEPPER”

GALLIC-ACID
 P-HYDROXYBENZOIC-ACID PL
 HHB
 P-HYDROXYCINNAMIC-ACID
 ISORHAMNETIN PL HHB
 KAEMPFEROL PL HHB
 MALIC-ACID PL HHB
 OXALIC-ACID PL HHB
 PROTOCATECHUIC-ACID PL HHB
 QUERCETIN PL HHB
 TARTARIC-ACID PL HHB
 VANILLIC-ACID PL HHB

POLYGONUM MULTIFLORUM
THUNB.

"FLEECEFLOWER"

"FO TI"

"CHINESE CORNBIND"

ALUMINUM 152 RT PED
 ANTHRAQUINONES RT CCO
 ARSENIC 0.11 RH CAL
 ASCORBIC-ACID TR RT PED
 ASH 70,000 RT PED
 CALCIUM 3,370 RT PED
 CALCIUM 15,300 RH CAL
 CARBOHYDRATES 735,000 RT PED
 BETA-CAROTENE 2.4 RT PED
 D-CATECHIN RT CCO
 CHROMIUM TR RT PED
 CHRYSOPHANIC-ACID RT CCO
 CHRYSOPHANIC-ACID-ANTHRONE PL
 CRC
 CHRYSOPHANOL PL CRC
 COBALT 145 RT PED
 COPPER 5 RH CAL
 3,3'-DI-O-GALLOYLPROCYANIDIN-B-2
 RT CCO
 EMODIN RT CCO
 EMODIN-MONOMETHYL-ETHER RT
 WOI 2/
 D-EPICATECHIN RT CCO
 FAT 15,000 RT PED
 FIBER 175,000 RT PED
 3-O-GALLOYL-L-CATECHIN RT CCO
 3-O-GALLOYL-L-EPICATECHIN RT CCO
 3-O-GALLOYL-PROCYANIDIN-B-1 RT
 CCO
 IRON 156 RT PED
 IRON 150 RH CAL
 KILOCALORIES 3,200 RT PED
 LECITHIN RT CCO
 MAGNESIUM 890 RH CAL
 MAGNESIUM 2,340 RT PED
 MANGANESE 26 RH CAL
 MANGANESE 21 RT PED
 MONOMETHYL-ETHER RT CCO
 PHOSPHORUS 1,040 RT PED
 POLYGOACETOPHENOSIDE PL JSG
 POTASSIUM 9,120 RH CAL
 POTASSIUM 10,800 RT PED
 PROTEIN 18,000 RT PED
 RHAPONTICIN RT HHB
 RHAPONTIN RT WOI
 RHEIN RT CCO
 RIBOFLAVIN 0.9 RT PED

SELENIUM 74 RT PED
 SILICON TR RT PED
 SODIUM 117 RH CAL
 SODIUM 42 RT PED
 STARCH RT CCO
 2,3,5,4'-TETRAHYDROXYSTILBENE-2-O-
 GLUCOSIDE RT CCO
 THIAMIN 0.1 RT PED
 TIN 13 RT PED
 WATER 800,000 RT PED
 ZINC 8 RH CAL
 ZINC TR RT PED

1/Pedersen's values for roots seem compa-
 rable to CAL data for rhizomes;strengthens
 my faith in both data. 2/Rootstock eaten as
 food WOI.

POLYMNIA EDULIS WEDDELL

"ANDEAN JICAMA"

ASCORBIC-ACID 250-1,400 RT PAN
 ASH 3,000-67,000 RT CRC PAN
 CALCIUM 150-1,650 RT PAN
 CARBOHYDRATES 81,000-856,000 RT
 CRC PAN
 BETA-CAROTENE 2.6-10 RT PAN
 FAT 3,000-33,000 RT CRC PAN
 FIBER 3,000-57,000 RT CRC PAN
 IRON 6-66 RT PAN
 KILOCALORIES 670-3,765 CRC PAN
 NIACIN 14-82 RT PAN
 PHOSPHORUS 150-1,650 RT PAN
 PROTEIN 1,000-73,000 RT CRC PAN
 RIBOFLAVIN 0.2-1.1 RT PAN
 THIAMIN 0.2-1.1 RT PAN
 WATER 822,000-909,000 RT PAN

POLYPODIUM AUREUM L.

"CALAGUALA"

CALAGUALINE LF JFM
 ECDYSONE RH HHB
 ECDYSTERONE RH JFM
 POLYPODAUREINE RH JFM

POLYPODIUM VULGARE L.

"COMMON POLYPODY"

"SWEET FERN"

BENZOIC-ACID RT HHB
 BUTYRIC-ACID RH HHB
 CAFFEIC-ACID RH HHB

CAOUTCHOUC RT HHB
 (+)-CATECHIN-7-L-ARABINOSIDE RH
 HHB
 CATECHINS 25,000-37,000 RH HHB
 DELTA-7-CHOLESTANOL RH HHB
 CITRIC-ACID RT HHB
 CITROSTADIENOL RH HHB
 CRUSECDYSONE RH HHB
 CYCLOARTANOL RH HHB
 CYCLOLAUDENOL RH HHB
 ECDYSONES 20,000 RH HHB
 17,21-EPOXYHOPANE RH HHB
 9(11)-FERNENE RH HHB
 FILICIN RH HHB
 FRUCTOSE 21,000 RH HHB
 FUCOSTEROL? RH HHB
 GLUCOCAFFEIC-ACID RH HHB
 GLUCOSE 21,000 RH HHB
 GLYCYRRHIZIN 6,000 RH HHB
 HOPENE-1-OXIDE RH HHB
 22-HOPENE RH HHB
 20-HYDROXYECDYSONE RH HHB
 5-BETA-20-HYDROXYECDYSTERONE
 RH HHB
 ISOFUCOSTEROL? RH HHB
 ISOVALERIANIC-ACID RH HHB
 LAURIC-ACID RH HHB
 LOPHENOL RH HHB
 24-LOPHENOLMETHYLENE RH
 HHB
 MALIC-ACID RT HHB
 METHYLETHYLACETIC-ACID RH
 HHB
 26-O-METHYLPOLYPODOSAPONIN RH
 HHB
 METHYL-SALICYLATE RH HHB
 31-NORCYCLOARTANOL RH HHB
 31-NORCYCLOLAUDENOL RH HHB
 OSLADIN RH HHB
 PHLOROGLUCINS 5,300 RH HHB
 PHYTOSTEROL RT HHB
 POLLINASTANOL RH HHB
 POLYDINE RH HHB
 POLYPODIN-A RH HHB
 POLYPODOSAPONIN RH HHB
 RESIN RH HHB
 RHAMNOSE RT HHB
 SALICYLIC-ACID LF HHB
 SAMAMBAIN RT HHB
 SERRATINE RH HHB
 BETA-SITOSTEROL RH HHB
 STARCH 63,000 RH HHB
 STEARIC-ACID RH HHB
 SUCROSE 155,000 RH HHB

POLYSTICHUM

POLYBLEPHARUM (ROEM.)

PRESL

“CHINESE POLYSTICHUM”

ARSENIC ND PL CPB38:2205
 BARIUM 22-90 PL CPB38:2205
 BROMINE 2-10 PL CPB38:2205
 CALCIUM 6,000-6,900 PL CPB38:2205
 CHLORINE 3,000-4,700 PL CPB38:2205
 CHROMIUM 4-20 PL CPB38:2205
 COPPER 10 PL CPB38:2205
 IODINE ND PL CPB38:2205
 IRON 500-1,900 PL CPB38:2205
 LEAD ND PL CPB38:2205
 MANGANESE 37-62 PL CPB38:2205
 MOLYBDENUM ND PL CPB38:2205
 NICKEL ND PL CPB38:2205
 PHOSPHORUS 900 PL CPB38:2205
 POTASSIUM 12,000-20,000 PL
 CPB38:2205
 RUBIDIUM 10-13 PL CPB38:2205
 STRONTIUM 20-60 PL CPB38:2205
 SULFUR 1,700-2,100 PL CPB38:2205
 TITANIUM 50-121 PL CPB38:2205
 ZINC 34-60 PL CPB38:2205

POPULUS BALSAMIFERA L.

“BALSAM POPLAR”

ACETOPHENONE EO HHB
 AZELAINIC-ACID BK HHB
 BEHENIC-ACID BK HHB
 BISABOLENE EO HHB
 BISABOOL EO HHB
 CADINENE EO HHB
 CAFFEIC-ACID EO HHB
 CARYOPHYLLENE BUD AYL
 D-CATECHIN LF HHB
 CEROTINIC-ACID BK HHB
 CINEOLE BUD AYL
 CINNAMIC-ACID LF HHB
 CINNAMIC-ALCOHOL EO HHB
 P-COUMARIC-ACID LF HHB
 1-P-COUMAROYL-BETA-D-GLUCOSE
 LF HHB
 AR-CURCUMENE BUD AYL
 (-)-CURCUMENE PL JSG
 DIHYDROMYRICETIN BK HHB
 2',6'-DIOXY-4'-METHOXY-BETA-
 PHENYLPROPIOPHENONE EO HHB
 2,6-DIMETHOXY-P-BENZOQUINONE
 BK HHB

11-EICOSANIC-ACID BK HHB
 FARNESENE EO HHB
 GENTISIC-ACID-BENZYLESTER EO HHB
 N-HEPTACOSANE BUD HHB
 HUMULENE BUD AYL
 3-HYDROXY-5-PHENYLVALERIC-ACID
 LF HHB
 LIGNOCERIC-ACID-ESTER BK HHB
 LINOLENIC-ACID-ESTER BK HHB
 N-NONACOSANE BUD HHB
 OLEIC-ACID-ESTER BK HHB
 PALMITIC-ACID-ESTER BK HHB
 PALMITOLEIC-ACID-ESTER BK HHB
 N-PENTACOSANE BUD HHB
 BETA-PHENYLETHYLALCOHOL EO HHB
 POPULIN BUD AYL
 POPULOSIDE BK HHB
 PYROCATECHIN LF HHB
 QUERCETIN-3,7-DIMETHYLETHER BK
 HHB
 SALICIN EO LF HHB
 SALICORTIN LF BK HHB
 SALICYL-ALCOHOL LF HHB
 SALICYLOYL-SALICIN BL HHB
 OMEGA-SALICYLOYL-SALICIN LF HHB
 SALIREPOSIDE BK HHB
 TRICHOCARPIN LF HHB
 TRICHOCARPOSIDE BK HHB

POPULUS NIGRA L.

"BLACK POPLAR"

CAFFEIC-ACID-3-BETA-G-
 GLUCOPYRANOSIDE LF HHB
 CHRYSIN BUD HHB
 EO 5,000 BUD HHB
 GALLIC-ACID BUD HB
 GENTISIC-ALCOHOL-2-BETA-D-(6-
 BENZOYL)-GLUCOPYRANOSIDE HHB
 D-ISOLARICIREBINOL-MONO-BETA-D-
 GLUCOPYRANOSIDE HHB
 KAEMPFEROL-DIMETHYLETHER FL
 HHB
 MALIC-ACID BUD HHB
 MANNITOL BUD HHB
 NIGRACIN BUD HHB
 POPULIN BUD HHB
 QUERCETIN-DIMETHYL-ETHER IN
 HHB
 RESIN BUD HHB
 SALICIN BUD HHB
 SALICORTIN BUD HHB
 SCHICORTIN BUD HHB
 TANNIN BUD HHB

TECTOCHRYSIN BUD HHB
 ALPHA-TOCOPHEROL IN HHB
 GAMMA-TOCOPHEROL IN HHB
 ZETA-TOCOPHEROL IN HHB

POPULUS TACAMAHACCA Mill.

"BALM OF GILEAD"

ACETOPHENONE BUD AYL
 BISABOLENE BUD AYL
 D-ALPHA-BISABOLOL BUD AYL
 D-CADINENE BUD AYL
 ALPHA-CARYOPHYLLENE BUD HHB
 BETA-CARYOPHYLLENE BUD HHB
 CHRYSIN BUD HHB
 CINEOLE BUD AYL
 AR-CURCUMENE BUD AYL
 EO 20,000 BUD AYL
 FARNESENE BUD AYL
 GALANGIN BUD HHB
 GALANGIN-3-METHYLETHER BUD
 HHB
 GENKWANIN BUD HHB
 HUMULENE BUD AYL
 ISORHAMNETIN BUD HHB
 IZALPININ BUD HHB
 KAEMPFEROL BUD HHB
 KAEMPFEROL-3-METHYLETHER BUD
 HHB
 PARAFFIN 5,000 BUD HHB
 BETA-PHENETHYL-ALCOHOL BUD
 AYL
 3-ACETYL-PINOBANKSIN BUD HHB
 PINOCEMBRIN BUD HHB
 PINOCEMBRIN-7-METHYLETHER BUD
 HHB
 POPULIN BUD HHB
 QUERCETIN BUD HHB
 RHAMNAZIN BUD HHB
 RHAMNETIN BUD HHB
 RHAMNOCITRIN BUD HHB
 SALICIN BUD HHB
 TECTOCHRYSIN BUD HHB

I here enter what AYL and HHB had for
 balm of gilead buds

PORTULACA OLERACEA L.

"PURSLANE"

ALANINE 570-13,400 HE JEL USA
 EFN26:71
 ALKALOIDS 300 LF HHB
 ARABINOSE

ARGININE 520-10,400 HE JEL USA
 EFN26:71
 ASCORBATE 224-5,230 PL PCO
 ASCORBIC-ACID 105-7,000 HE JAD USA
 ASH 14,000-159,090 HE PAN
 ASPARAGIC-ACID PL HHB
 ASPARTIC-ACID 770-19,600 HE JEL
 USA EFN26:71
 BEHENIC-ACID 2,262 SD
 CAFFEIC-ACID PL JLS58:121
 CALCIUM 780-20,800 HE JAD JEL USA
 CALCIUM-OXALATE HE HHB
 CARBOHYDRATE 35,500-632,000 HE
 JAD USA
 BETA-CAROTENE 11-4,650 HE JAD PCO
 USA
 CATECHOL
 CELLULOSE 105,000-132,000 JE BUS JEL
 CHLORINE 730-7,300 HE WOI
 CHLOROPHYLL PL HHB
 CITRIC-ACID 5,100 PL HHB
 COPPER 2-19 HE WOI
 BETA-CYANIN HE HHB
 CYSTINE 100-4,200 HE USA EFN26:71
 DIGALACTOSYLDIACYLGLYCEROL
 HE PCO
 3-(3,4-DIHYDROXYPHENYL)ALANINE
 DOCOSAHEXAENOIC-ACID HE PCO
 DOPA
 EICOSAPENTAENOIC-ACID 10 HE PCO
 FAT 1,900-63,000 HE JAD USA
 FAT 174,000 SD JAD
 FERULIC-ACID PL JLS58:121
 FIBER 8,100-137,000 HE JAD USA
 FOLACIN
 FRUCTOSE
 GALACTOSE
 GLUCOSE HE HHB
 GLUTAMIC-ACID 1,500-33,792 HE USA
 EFN26:71
 GLUTATHIONE 115-2,960 HE PCO
 GLYCINE 460-11,000 HE JEL USA
 EFN26:71
 HCN
 HISTIDINE 220-5,170 HE USA EFN26:71
 IRON 8-467 HE JAD USA
 ISOLEUCINE 530-11,400 HE JEL USA
 EFN26:71
 KILOCALORIES 260-2,955 HE PAN
 LEUCINE 880-19,900 HE JEL USA
 EFN26:71
 LINOLEIC-ACID 704-18,245 HE PCO
 LINOLEIC-ACID 67,686 SD
 LINOLENIC-ACID 3,221-64,315 HE PCO
 ALPHA-LINOLENIC-ACID 4,000-80,000
 HE PCO
 LINOLENIC-ACID 17,226 SD
 LYSINE 650-13,200 HE USA EFN26:71
 MAGNESIUM 670-18,700 HE JAD JEL
 USA
 MALIC-ACID 5,100 PL HHB
 MANGANESE
 METHIONINE 90-2,814 HE JEL USA
 EFN26:71
 MONOGALACTOSYLDIACYLGLYCEROL
 HE PCO
 MUCILAGE 4,200
 MYRISTIC-ACID 7-140 HE PCO
 NIACIN 5-79 HE JAD JEL USA
 L-NORADRENALIN 2,500
 NOREPINEPHRINE
 OLEIC-ACID 16-2,160 HE PCO
 OLEIC-ACID 49,935 SD
 OLERACIN-I
 OLERACIN-II
 OMEGA-3'S 30,000
 OXALATES (13,100-215,500 SH JEL TOO
 HIGH??) JEL
 OXALIC-ACID 1,679-16,790
 PALMITIC-ACID 616-18,966 HE PCO USA
 PALMITOLEIC-ACID 140-2,940 HE PCO
 PANTOTHENIC-ACID
 PHENYLALANINE 580-11,500 HE JEL
 USA EFN26:71
 PHOSPHATIDYLCHOLINE PL PCO
 PHOSPHATIDYLETHANOLAMINE PL
 PCO
 PHOSPHATIDYLGLYCEROL LF PCO
 PHOSPHATIDYLOSITOL LF PCO
 PHOSPHATIDYL SERINE LF PCO
 PHOSPHORUS 320-7,740 HE JAD JEL
 PAN USA
 PHYTIN-P 4-40
 POTASSIUM 4,880-81,200 HE JAD JEL
 USA
 PROLINE 540-13,200 HE JEL USA
 EFN26:71
 PROTEIN 13,000-260,000 HE JAD USA
 EFN26:71
 RESIN 24,000 PL HHB
 RIBOFLAVIN 1-23 HE JAD USA
 SAPONIN
 SERINE 450-8,440 HE USA
 SINAPIC-ACID PL JLS58:121
 BETA-SITOSTEROL SD HHB
 SODIUM 440-7,400 HE JAD JEL USA
 STEARIC-ACID 6,438 SD
 SUCROSE PL HHB

SULFOLIPIDS PL PCO
 SULFUR 630-6,300
 TANNIN
 THIAMIN 1-10 HE JAD USA
 THREONINE 470-9,400 HE USA
 EFN26:71
 TOCOPHEROL 82-2,309 PL PCO
 TRYPTOPHAN 160-3,400 HE USA
 EFN26:71
 TYROSINE 220-4,400 HE JEL USA
 EFN26:71
 VALINE 660-13,200 HE JEL USA
 EFN26:71
 VIT-B6
 WATER 912,000-950,000 HE JAD HHB
 PAN USA
 ZINC 3-60 SH JEL

PCO= personal communication, Dr. H.
 Norman. Higher JEL data may apply to
 leaves rather than whole herb.

POTHOMORPHE SP

"SANTIAGO"

ASCORBIC-ACID
 ASH 17,000-95,000 LF CRC
 CALCIUM 1,690-9,440 LF CRC
 CARBOHYDRATES 82,000-458,000 LF
 CRC
 FAT 34,000-190,000 LF CRC
 FIBER 18,000-101,000 LF CRC
 KILOCALORIES 690-3,850 LF CRC
 PHOSPHORUS 400-2,235 LF CRC
 PROTEIN 46,000-257,000 LF CRC
 WATER 820,000 LF CRC

Nutritional data based on *P. umbellata*

PROSOPIS JULIFLORA (SW.) DC.

"MESQUITE"

APIGENIN PL CRC
 APIGENIN-6,8-DIGLUCOSIDE PL CRC
 L-ARABINOSE PL CRC
 ASH 48,000 FR CRC
 ASH 85,000 LF CRC
 ASH 35,000-300,000 SD CRC
 CALCIUM 20,800 LF CRC
 CARBOHYDRATES 783,000 FR CRC
 CARBOHYDRATES 696,000 LF CRC
 CARBOHYDRATES 218,000 SD CRC
 CELLULOSE 272,400 FR CRC
 FAT 30,000 FR CRC

FAT 29,000 LF CRC
 FAT 53,000-78,000 SD CRC
 FIBER 277,000 FR CRC
 FIBER 216,000 LF CRC
 FIBER 28,000 SD CRC
 D-GALACTOSE PL CRC
 GLUCOSE 302,500 FR CRC
 5-HYDROXYTRYPTAMINE PL CRC
 ISORHAMNETIN-3-GLUCOSIDE PL
 CRC
 4-O-METHYL-D-GLUCURONIC-ACID PL
 CRC
 PHOSPHORUS 2,200 LF CRC
 PROTEIN 139,000 FR CRC
 PROTEIN 190,000 LF CRC
 PROTEIN 300,000-652,000 SD CRC
 QUERCETIN
 STARCH 163,600 FR CRC
 SUGAR 330,000 FR JFM
 SUGAR 330,000 SD JFM
 TANNIN 6,000-84,000 BK CRC JFM
 TANNIN 67,000 RT CRC
 TANNIN 9,000 WD CRC
 TANNINS 58,100 FR CRC
 TRYPTAMINE PL CRC

PRUNELLA VULGARIS L.

"SELF-HEAL"

ARSENIC 0.37 FL CAL
 CIS-CAFFEIC-ACID PL HHB
 TRANS-CAFFEIC-ACID PL HHB
 CALCIUM 14,500 FL CAL
 D-CAMPOR FL CCO
 COPPER 8 FL CAL
 CYANIDIN FL CCO
 DELPHINIDIN FL CCO
 EO 5,000 PL HHB
 D-FENCHONE FL CCO
 HYPEROSIDE PL CCO
 IRON 640 FL CAL
 MAGNESIUM 4,560 FL CAL
 MANGANESE 96 FL CAL
 MERCURY 0.06 FL CAL
 OLEANOLIC-ACID PL CCO
 POTASSIUM 11,900 FL CAL
 POTASIU-CHLORIDE 23,800 PL CCO
 RESIN PL CCO
 ROSMARINIC-ACID 61,000 PL FT62:166
 RUTIN PL CCO
 SODIUM 155 FL CAL
 TANNIN (500,000) PL HHB
 URSOLIC-ACID FL CCO
 ZINC 25 FL CAL

PRUNUS ARMENIACA L.
"APRICOT"

ACETIC-ACID EO	GLUCOSE 32,000-48,000 FR
ALANINE 680-4,980 FR USA	GLUTAMIC-ACID 1,570-11,500 FR USA
AMYGDALIN 80,000 SD HHB	GLYCINE 400-2,930 FR USA
AMYLASE FR	GLYCOSIDES 29,000-36,000 LF; 150 FR
ARGININE 450-3,300 FR USA	HCN SD
ASCORBIC-ACID 100-745 FR USA	HISTIDINE 270-1,980 FR USA
ASPARTIC-ACID 3,140-23,000 FR USA	INVERTASE FR
ASH 7,000-105,000 FR USA	M-INOSITOL
ASH 10,000-30,000 SD HHB	IODINE 0.05 FR
BENZYL-ALCOHOL FR HHB	IRON 42-48 SD SMO
BORON 1-70 FR BOB	IRON 5-79 FR HUL USA
CAFFEIC-ACID PL JLS58:130	ISOBUTYRIC-ACID FR HHB
CALCIUM 930-1522 SD SMO	ISOLEUCINE 410-3,000 FR USA
CALCIUM 134-1,899 FR HUL USA	ISOQUERCITRIN FR HHB
GAMMA-CAPROLACTONE FR HHB	KAEMPFEROL LF
CAPRONIC-ACID FR HHB	KAEMPFEROL-3-GALACTOSIDE
CALCIUM-PECTATE 10,000 FR	KAEMPFEROL-3-GLUCOSIDE
CAMPESTEROL SD	KAEMPFEROL-3-RUTINOSIDE LF
CARBOHYDRATES 111,200-873,000 FR USA	KILOCALORIES 480-3,515 FR USA
CARBOHYDRATES 140,000 SD	LEUCINE 770-5,640 FR USA
BETA-CAROTENE 13-189 FR CRC USA	LIMONENE EO
BETA-CAROTENE 0 SD CRC	LINALOOL FR HHB
GAMMA-CAROTENE FR HHB	LINOLEIC-ACID 770-5,640 FR USA
CHLOROGENIC-ACID FR CRC(FSN)	LINOLEIC-ACID 56,000-411,200 SD HHB
DELTA-24-CHOLESTEROL SD HHB	LYCOPENE FR HHB
CITRIC-ACID FR	LYSINE 970-7,105 FR USA
COPPER 1-16 SD SMO USA	MAGNESIUM 76-615 FR USA
P-COUMARIC-ACID PL JLS58:131	MAGNESIUM 1,750 SD SMO
CYANIDIN PL JLS58:131	MALIC-ACID 7,000-22,000 FR
P-CYMENE LF	MANGANESE 1-11 SD SMO USA
CYSTINE 30-220 FR USA	METHIONINE 60-440 FR USA
GAMMA-DECALACTONE	2-METHYLBUTYRIC-ACID
DEXTROSE 81,000-116,000 SD	MYRCENE EO
EMULSIN FR HHB	MUFA 170-1,245 FR USA
EO 8,000-16,000 SD	NEOCHLOROGENIC-ACID FR CRC(FSN)
CIS-EPOXYDIHYDROLINALOOL	NIACIN 17 SD
TRANS-EPOXYDIHYDROLINALOOL FR HHB	NIACIN 6-61 FR USA
ESTRONE SD HHB	DELTA-OCTALACTONE FR HHB
ALPHA-ESTRADIOL SD HHB	OLEIC-ACID 170-1,245 FR USA
FAT 2,200-41,000 FR USA	OLEIC-ACID 248,000-411,200 SD HHB
FAT 400,000-514,000 SD HHB	JAD
FIBER 6,000-132,000 FR USA	PALMITIC-ACID 240-1,760 FR USA
FIBER 33,000 SD	PANGAMIC-ACID SD HHB
FOLACIN 0.07-0.7 FR USA	PANTOTHENIC-ACID 2.4-17.6 FR USA
FRUCTOSE 14,000-42,000 FR	PHENYLALANINE 520-3,810 FR USA
GERANIAL EO	PHYTOSTEROLS 180-1,320 FR USA
GAMMA-CAPRALACTONE FR	PHOSPHORUS 3,000 SD
GERANIOL EO	PHOSPHORUS 180-2,982 FR USA
	POTASSIUM 4,180-7783 SD
	POTASSIUM 2,824-22,565 FR USA
	PROLINE 1,010-7,400 FR USA
	PROTEIN 10,000-127,000 FR USA
	PROTEIN 315,000 SD
	PUFA 770-5,640 FR USA

QUERCETIN PL JLS58:131
 QUERCITIN FR HHB
 QUERCITIN-3-DIGLUCOSIDE FR
 QUERCITIN-3-GALACTOSIDE
 QUERCITIN-3-GLUCOSIDE
 QUERCITIN-3-RHAMNOSIDE
 QUERCITIN-3-RUTINOSIDE
 QUINIC-ACID FR CRC(FSN)
 RIBOFLAVIN 0.4-4.4 FR USA
 RIBOFLAVIN 5.3 SD
 RUTIN 17,700 LF FT60:182
 SERINE 830-6,080 FR USA
 SFA 270-1,980 FR USA
 SODIUM 18-19 SD SMO
 SODIUM 10-88 FR USA
 BETA-SITOSTEROL SD
 SORBITOL
 SQUALENE 200 SD HHB
 STEARIC-ACID 30-220 FR USA
 SUCCINIC-ACID FR
 SUCROSE 14,000-54,000 FR
 TANNIN 600-1,000 FR
 TARTARIC-ACID FR
 TERPINOLENE EO
 ALPHA-TERPINEOL EO
 THIAMIN 0.3-2.5 FR USA
 THIAMIN 1.5 SD
 THREONINE 470-3,445 FR USA
 TRANS-2-HEXENAL EO
 TRYPTOPHAN 150-1,100 FR USA
 TYROSINE 290-2,125 FR USA
 VALINE 470-3,445 FR USA
 VIT-B6 0.5-4 FR USA
 WATER 963,500 FR USA
 XYLOSE
 ZINC 2-38 SD SMO USA

PRUNUS CERASUS L.

“SOUR CHERRY”

ACETIC-ACID FR 1/
 ALPHA-ALANINE FR 1/
 BETA-ALANINE FR 1/
 ALLANTOIN ST HHB
 GAMMA-AMINOBUTYRIC-ACID FR 1/
 AMYGDALIN LF WOJ
 ANTIRRHININ FR 1/
 APIGENIN PL PAS
 ARACHIDIC-ACID 2,400-3,200 SD WOJ
 ARGININE FR 1/
 AROMADENDRIN PL PAS 2/
 AROMADENDRINOL PL JSG
 ASCORBIC-ACID 70-873 FR CRC USA
 ASH 4,000-48,000 FR CRC USA

ASPARAGINE FR 1/
 ASPARTIC-ACID FR 1/
 BENZALDEHYDE 3 FR 1/
 BENZOIC-ACID-ETHYL-ESTER
 BORON 1-80 FR BOB
 CAFFEIC-ACID PL JLS58:131
 CALCIUM 140-1,954 FR CRC USA
 CARBOHYDRATES 103,000-876,960 FR
 CRC USA
 BETA-CAROTENE 1-6 FR CRC USA
 CAROTENOIDS 1-10 FR 1/
 DL-CATECHIN ST HHB
 CERASIDIN PL JSG
 CERASIN PL JSG
 CERASINONE PL JSG
 CHLOROGENIC-ACID FR CRC(FNS)
 CHRYSIN PL PAS 2/
 CITRIC-ACID FR HHB
 P-COUMARIC-ACID FR HHB
 COUMARIN PL PAS
 O-CRESOL PL PAS
 P-CRESOL PL PAS
 CRYPTOCHLOROGENIC-ACID FR
 CRC(FNS)
 CYANIDIN FR HHB
 CYANIDIN-3-DIGLUCOSIDE FR HHB
 CYANIDIN-3-GENTIOBIOSIDE FR HHB
 CYANIDIN-3-GLUCOSIDE ST HHB
 CYANIDIN-3-GLUCOSYL-RHAMNOSYL-
 GLUCOSIDE ST HHB
 CYANIDIN-3-MONOGLUCOSIDE FR 1/
 CYANIDIN-3-RUTINOSIDE ST HHB
 CYANIDIN-3-SOPHOROSIDE ST HHB
 DECAN-1-AL PL PAS
 DIHYDROCOUMARIN PL PAS
 2,3-DIHYDROWOGONIN FR HHB
 2,3-DIHYDROWOGONIN-7-MONO-BETA-
 D-GLUCOSIDE FR HHB
 EO 10,000 SD WOJ
 EPICATECHIN PL PAS
 EUGENOL PL PAS
 EUGENOL-METHYL-ETHER
 FAT 3,000-48,000 FR CRC USA
 FERULIC-ACID PL JLS58:131
 FIBER 2,000-79,000 FR CRC USA
 FOLACIN 1-6 FR USA
 FRAXINOL PL PAS
 FUMARIC-ACID FR HHB
 FRUCTOSE 61,000-72,400 FR 1/
 GALACTURONIC-ACID FR HHB
 GALLIC-ACID PL PAS
 GENISTEIN FR HHB
 GENISTIN FR HHB
 GLUCOSE 47,000-55,000 FR 1/

GLUCURONIC-ACID FR HHB
 GLUTAMIC-ACID FR 1/
 GLUTAMINE FR 1/
 GLYCINE FR 1/
 HCN FR 1/
 2-HEPTANONE FR 1/
 P-HYDROXYBENZOIC-ACID PL PAS
 4-HYDROXYMETHYLPROLINE FR 1/
 HYPEROSIDE PL PAS
 BETA-IONONE PL PAS
 IRON 3-78 FR CRC USA
 ISOCHLOROGENIC-ACID FR HHB
 ISOVALERIC-ACID FR 1/
 KAEMPFERIDE PL PAS
 KAEMPFEROL PL PAS
 LACTIC-ACID FR HHB
 LEUCINE FR 1/
 LEUCOCYANIDIN FR HHB
 LINALOOL FR 1/
 LINOLEIC-ACID 460-3,312 FR USA
 LINOLEIC-ACID 127,200-169,600 SD WOI
 ALPHA-LINOLENIC-ACID 440-3,168 FR
 USA
 MAGNESIUM 90-648 FR USA
 MALEIC-ACID FR 1/
 MALIC-ACID FR WOI (1.4% JU)
 MANGANESE 1-8 FR USA
 MANNITOL FR 1/
 MESOCYANIN FR 1/
 24-METHYLENE-CYCLOARTENOL PL
 PAS
 2-METHYL-MALIC-ACID FR HHB
 METHYL-SALICYLATE PL PAS
 MYRISTIC-ACID 20-144 FR USA
 MYRISTIC-ACID 600-800 SD WOI
 NARINGENIN FR HHB
 NEOCHLOROGENIC-ACID FR HHB
 NIACIN 4-32 FR CRC USA
 OCTANOIC-ACID FR 1/
 OLEANOLIC-ACID FR HHB
 OLEIC-ACID 810-5,832 FR USA
 OLEIC-ACID 148,200-197,600 SD WOI
 PAEONIDIN FR HHB
 PAEONIDIN-3-DIGLUCOSIDE
 PAEONIDIN-3-RUTINOSIDE FR HHB
 PALMITIC-ACID 480-3,456 FR USA
 PALMITIC-ACID 12,900-17,200 SD WOI
 PALMITOLEIC-ACID 10-72 FR USA
 PANTOTHENIC-ACID 1-10 FR USA
 PECTINS 6,000-18,000 FR HHB
 PECTINESTERASE FR 1/
 PHENYLALANINE FR 1/
 PHOSPHORUS 150-2,302 FR CRC USA
 PIPECOLIC-ACID FR 1/

POTASSIUM 1,120-19,277 FR CRC USA
 PROLINE FR 1/
 PROTEIN 9,890-103,000 FR CRC USA
 PROTOPECTIN FR 1/
 PRUNASIN SD WOI
 PRUNETIN FR HHB
 QUERCETIN FR HHB
 QUERCETIN-3-BETA-D-GLUCOSIDE PL
 PAS
 QUERCETIN-7-HETEROSIDE
 QUERCITRIN PL PAS
 QUINIC-ACID FR HHB
 RIBOFLAVIN 0-5 FR CRC USA
 RUTIN PL PAS
 SERINE FR 1/
 SHIKIMIC-ACID FR HHB
 BETA-SITOSTEROL PL PAS
 SODIUM 30-216
 SORBITOL FR 1/
 SQUALENE PL PAS
 STEARIC-ACID 160-1,152 FR USA
 STEARIC-ACID 8,700-11,600 SD WOI
 STIGMASTEROL PL PAS
 SUCCINIC-ACID FR HHB
 SUGARS 68,000-104,400 FR 1/
 TANNIN 50,000-70,000 BM WOI
 TARTARIC-ACID FR HHB
 TAXIFOLIN PL PAS
 TAXIFOLIN-3-HETEROSIDE FR HHB
 TECTOCHRYISIN PL PAS
 THIAMIN 0-5 FR CRC USA
 THREONINE FR 1/
 ALPHA-TOCOPHEROL 1.3-9.4 FR USA
 TYROSINE FR 1/
 URSOLIC-ACID FR WOI
 VALINE FR 1/
 VANILLIC-ACID PL PAS
 WATER 826,000-874,000 FR CRC USA
 ZINC 1-7 FR USA

1/ Hulme 2/PAS=Paul Stitt; may be sweet
 cherry, may be sour cherry

PRUNUS DOMESTICA L.

"PLUM"

ALANINE 290-1,959 FR USA
 ALUMINUM 1-255 FR AAS USG
 AMYGDALIN 25,000 SD HHB
 ARACHIDIC-ACID 21,450-23,100 SD WOI
 ARGININE 130-878 FR USA
 ARSENIC 0.0011-0.51 FR USG
 ASCORBIC-ACID 86-699 FR USA
 ASH 3,810-170,000 FR USA USG

- ASPARTIC-ACID 2,490-16,824 FR USA
 BARIUM 0.154-25.5 FR USG
 BORON 1-255 FR BOB USG
 BROMINE <1 FR AAS
 CADMIUM 0.001-0.068 FR AAS USG
 CAFFEIC-ACID PL JLS8:130
 CALCIUM 38-2,040 FR USA USG
 CARBOHYDRATES 130,100-879,054 FR USA
 BETA-CAROTENE 1.4-43 FR USA
 JAF37:657
 CHLOROGENIC-ACID FR CRC(FNS)
 CHROMIUM 0.005-1.19 FR AAS USG
 CITRIC-ACID FR WOI
 COBALT <0.005-0.34 FR AAS USG
 COPPER 0.33-34 FR USG
 P-COUMARIC-ACID FR CRC(FNS)
 CRYPTOCHLOROGENIC-ACID FR CRC(FNS)
 CYANIDIN PL JLS8:130
 CYSTINE 40-270 FR USA
 DIHYDROKAEMPFERIDE WD WOI
 DIHYDROKAEMPFEROL WD WOI
 FAT 6,000-43,243 FR USA
 FAT 390,000-420,000 SD WOI
 FERULIC-ACID FR CRC(FNS)
 FIBER 6,000-40,540 FR USA
 FIBER 122,000 SD WOI
 FLUORINE 0.1-0.6 FR AAS
 FOLACIN 0.019-0.167 FR USA
 FRUCTOSE 27,000-61,000 FR USA
 D-GALACTOSE FR HHB
 GLYCINE 120-811 FR USA
 GLUCOSE 30,000-62,000 FR WOI
 GLUTAMIC-ACID 370-2,500 FR USA
 HCN 500 SD WOI
 HEXURONIC-ACID RE WOI
 HISTIDINE 130-878 FR USA
 IRON 0.8-85 FR USA USG
 ISOCHLOROGENIC-ACID FR CRC(FNS)
 ISOLEUCINE 160-1,081 FR USA
 KAEMPFERIDE WD WOI
 KAEMPFEROL WD WOI
 KILOCALORIES 550-3,716 FR USA
 LANTHANUM 1.5-12 FR USG
 LAURIC-ACID 3,510-3,780 SD WOI
 LEAD 0.02-11.9 FR AAS USG
 LECITHIN 1,500 SD USA
 LEUCINE 210-1,419 FR USA
 LINOLEIC-ACID 1,340-9,054 FR USA
 LINOLEIC-ACID 54,600-83,160 SD HHB
 WOI
 LITHIUM 0.088-0.68 FR USG
 LUTEIN 2.4-24 FR JAF37:657
 LYSINE 170-1,149 FR USA
 MAGNESIUM 68-3,400 FR USA USG
 MALIC-ACID 15,000 FR HHB
 MANGANESE 0.22-25.5 FR USG
 D-MANNOSE FR WOI
 MERCURY 0.00022-0.0125 FR AAS USG
 METHIONINE 60-405 FR USA
 4-O-METHYL-GLUCURONIC-ACID FR HHB
 MOLYBDENUM <0.1-1.7 FR AAS USG
 MUFA 4,060-27,432 FR USA
 MYRISTIC-ACID 14,820-15,960 SD WOI
 NEOCHLOROGENIC-ACID FR CRC(FNS)
 NIACIN 5-34 FR USA
 NICKEL 0.03-1.7 FR AAS USG
 NITROGEN 960-10,000 FR AAS
 OLEIC-ACID 4,000-27,027 FR USA
 OLEIC-ACID 254,280-306,600 SD HHB
 WOI
 PALMITIC-ACID 410-2,770 FR USA
 PALMITIC-ACID 2,340-2,520 SD WOI
 PALMITOLEIC-ACID 50-338 FR USA
 PANTOTHENIC-ACID 1.8-13 FR USA
 PECTIN 8,000-40,000 FR HHB WOI
 PERSICAXANTHIN PL JSG
 PHENYLALANINE 170-1,149 FR USA
 PHOSPHATIDES 3,000 SD WOI
 PHOSPHORUS 70-4,080 FR USG
 POTASSIUM 1,677-44,200 FR USA USG
 PROLINE 340-2,297 FR USA
 PROTEIN 7,660-55,000 FR USA
 PROTEIN 202,000 SD WOI
 PRUDOMESTIN WD WOI
 PUFA 1,340-9,054 FR USA
 QUERCETIN PL JLS8:130
 QUINIC-ACID FR HHB
 RHAMNOSE FR USA
 RIBOFLAVIN 0.9-6.5 FR USA
 RUBIDIUM 0.5-15 FR AAS
 SELENIUM 0.00011-0.0125 FR AAS USG
 SERINE 200-1,351 FR USA
 SEROTONIN FR HHB
 SFA 490-3,310 FR USA
 SILICON 2-62 FR AAS
 SILVER 0.022-0.51 FR USG
 SODIUM 0-54 FR USA USG
 STEARIC-ACID 90-608 FR USA
 STEARIC-ACID 16,380-17,640 SD WOI
 STRONTIUM 0.33-51 FR USG
 SUCCINIC-ACID FR HHB
 SUCROSE 7,000-48,000 FR WOI
 SUGAR 100,000-200,000 FR HHB
 SULFUR 4-400 FR AAS USG
 TANNIN 68,000 BK WOI

TARTARIC-ACID FR WOI
 THIAMIN 0.4-2.9 FR USA
 THREONINE 160-1,081 FR USA
 TITANIUM 0.11-25.5 FR USG
 ALPHA-TOCOPHEROL 8-62 FR TOT
 TRYPTAMINE FR HHB
 TYRAMINE FR HHB
 TYROSINE 60-405 FR USA
 VALINE 190-1,284 FR USA
 VIT-B6 0.7-6 FR USA
 D-XYLOSE FR HHB
 WATER 840,000-933,000 FR AAS USA
 USG
 ZINC 0.66-131 FR AAS USG
 ZIRCONIUM 0.44-3.4 FR USG

AAS=ACTA AGRIC SCAND SUPPL
 22:1980 H2O=84%; ZMB = 6.25 X APB

PRUNUS DULCIS (MILLER) D. A.
 WEBB

"ALMOND"

ALANINE 9,430-9,864 SD USA
 ALDOBIOURONIC-ACID
 ALUMINUM 3-10 SD AAS FUR
 AMYGDALIN 10,000-8,000 SD HHB
 ANTIMONY 0.1 SD
 L-ARABINOSE-GUM
 ARGININE 24,950-26,098 SD USA
 ARSENIC .02 SD FUR
 ASCORBIC-ACID 0-13 SD USA
 ASH 21,000-33,022 SD USA
 ASPARTIC-ACID 23,490-24,571 SD USA
 BARIUM 2.6 SD
 BENZALDEHYDE 8,200 SD
 BORON 8-38 SD AAS BOB FUR
 BROMINE 20 SD FUR
 CADMIUM 0.005-0.02 SD AAS FUR
 CAFFEIC-ACID PL JLS58:131
 CALCIUM 2,426-2,962 SD CRC USA
 CAPROIC-ACID FL
 CARBOHYDRATES 204,000-213,284 SD
 USA
 BETA-CAROTENE 0-0.05 SD USA
 CARBOHYDRATE 129,000-243,000 SD
 CESIUM 0.1 SD
 CHLORINE 28 SD
 CHROMIUM 0.1-1.7 SD AAS FUR
 COBALT 0.08-0.2 SD AAS FUR
 COPPER 1-11 SD AAS USA
 P-COUMARIC-ACID PL JLS58:131
 CRESOL FL
 CYANIDIN LF

CYSTINE 3,580-3,745 SD USA
 DAUCOSTEROL SD HHB
 I-DECANOL FL
 EO 5,000-18,000 SD HHB
 EUGENOL FL
 EUROPIUM 0.1 SD
 FAT 350,000-621,000 SD USA 411/
 FERULIC-ACID PL JLS58:131
 FIBER 18,000-32,000 SD USA
 FLUORINE 1.3 SD
 FOLACIN 1 SD USA
 FOLIC-ACID 0.45 SD
 GADOLEIC-ACID 500-523 SD USA
 D-GALACTOSE GUM
 GERANIOL FL
 D-GLUCURONIC-ACID GUM
 GLUTAMIC-ACID 59,340-62,070 SD USA
 GLYCINE 12,360-12,929 SD USA
 GOLD 0.001 SD
 HAFNIUM 0.04 SD
 HCN 40,000-70,000 SD HHB
 HISTIDINE 5,580-5,837 SD USA
 IODINE 0.1-0.2 SD
 IRON 35-60 SD AAS USA
 ISOLEUCINE 8,660-9,058 SD USA
 KAEMPFEROL PL JLS58:131
 KILOCALORIES 5,890-6,161 SD USA
 LANTHANUM 0.03 SD
 LAURIC-ACID 50-52 SD USA
 LEAD 0.07-0.4 SD AAS FUR
 LEUCINE 15,520-16,234 SD USA
 LINOLEIC-ACID 104,950-109,778 SD USA
 ALPHA-LINOLENIC-ACID 3,740-3,912
 SD USA
 LUTETIUM 0.01 SD
 LYSINE 6,660-6,966 SD USA
 MAGNESIUM 2,297-3,126 SD USA
 MANGANESE 14-32 SD AAS USA
 MERCURY 0.002-0.1 SD AAS FUR
 MOLYBDENUM 0.3 SD
 MUCILAGE 20,000-30,000 SD HHB
 MYRISTIC-ACID 2,980-3,117 SD USA
 NIACIN 26-63 SD USA
 NICKEL 1.2-1.6 SD AAS FUR
 NITROGEN 3,700-4,315 SD AAS
 OLEIC-ACID 332,760-348,067 SD USA
 OXALIC-ACID 4,073 SD WBB
 PALMITIC-ACID 34,550-36,139 SD USA
 PALMITOLEIC-ACID 3,040-3,180 SD
 USA
 PANTOTHENIC-ACID 4-5 SD USA
 PENTOSANS SD HHB
 PHENYLACETIC-ACID FL
 PHENYLALANINE 11,130-11,642 SD USA

PHENYLETHYL-ALCOHOL FL
 PHOSPHORUS 4,420-8,735 SD AAS USA
 PHYTIC-ACID 3624 SD
 PHYTOSTEROLS 143-149 SD USA
 POTASSIUM 4,538-8,560 SD USA
 PROLINE 12,550-13,127 SD USA
 PROTEIN 176,000-350,000 SD HHB USA
 PRUNASIN SD HHB
 QUERCETIN PL JLS58:131
 QUERCITRIN LF
 RIBOFLAVIN 1.6-9.7 SD USA
 RUBIDIUM 5-13 SD AAS FUR
 SAMARIUM 0.1 SD
 SCANDIUM 0.003 SD
 SELENIUM 0.005-06 SD AAS FUR
 SERINE 9,010-9,424 SD USA
 SILICON 960 SD
 BETA-SITOSTEROL SD HHB
 SODIUM 20-147 SD USA
 STEARIC-ACID 10,210-10,680 SD USA
 STRONTIUM 16 SD
 SUGAR 50,000-100,000 SD HHB
 SULFUR 3420 SD
 TANTALUM 0.03 SD
 THIAMIN 2.2-2.6 SD USA
 THORIUM 0.2 SD
 TIN 0.7 SD
 THREONINE 7,390-7,730 SD USA
 TITANIUM 3.5 SD
 ALPHA-TOCOPHEROL 150-275 SD TOT
 USA
 GAMMA-TOCOPHEROL 5 SD
 TRYPTOPHAN 3,580-3,745 SD USA
 TUNGSTEN 0.1 SD
 TYROSINE 7,050-7,374 SD USA
 VALINE 10,280-10,752 SD USA
 VANADIUM 0.02 SD
 VIT-B6 1 SD USA
 D-XYLOSE GUM
 YTTERBIUM 0.1 SD
 ZINC 26-37 SD AAS FUR

Much mineral data from Furr et al, 1979
 OTHER FROM ACTA AGRIC SCAND
 SUPPL 22:1980.

PRUNUS LAUROCERASUS L.

"CHERRY LAUREL"

BENZALDEHYDE 413-456 LF CRC HHB
 BENZYL-ALCOHOL LF 411/
 CAFFEIC-ACID PL JLS58:131
 P-COUMARIC-ACID PL JLS58:131
 CYANIDIN PL JLS58:131

EO 500 LF CRC
 FAT 250,000-450,000 SD CRC WOI
 GLUCOSE LF HHB
 GLUCOSIDES 15,000 LF 411/
 HCN 340 SD WOI
 HCN 1,200 LF CRC HHB
 KAEMPFEROL PL JLS58:131
 LINOLENIC-ACID 3,300-3,960 SD WOI
 MANDELONITRILE GLUCOSIDES
 10,000 LF 411/
 MYRISTIC-ACID 450-540 SD WOI
 OLEIC-ACID 18,350-22,020 SD WOI
 PALMITIC-ACID 2,475-2,970 SD WOI
 PROTEIN 31,000 SD CRC
 PRULAUASIN LF HHB
 PRUNASIN 14,000-15,000 LF AYL HHB
 QUERCETIN PL JLS58:131
 SAMBUNIGRIN LF HHB
 STEARIC-ACID 425-510 SD WOI
 TANNIN LF HHB
 URSOLIC-ACID 10,000 LF HHB
 WAX LF HHB

PRUNUS PERSICA (L.) BATSCH

"PEACH"

(+)-ABSCISIC-ACID PL JSG
 ACETALDEHYDE FH HHB
 ACETIC-ACID FR HHB
 D-AFZELECHIN RT ABS
 AFZELIN FL CCO
 ALANINE 420-3,402 FR USA
 ALUMINUM 43 BK PED
 ALUMINUM 2.25-1,050 FR USG
 AMANDIN SD
 AMYGDALIN 10,000 LF HHB
 AMYGDALIN 25,500-60,000 SD HHB
 ANTHOCYANIDIN FR HHB
 L-ARABINOSE GUM WOI
 ARGININE 180-1,458 FR USA
 ARSENIC 0.00075-0.0525 FR USG
 ASCORBIC-ACID 14-1,127 FR WOI
 ASH 63,000 BK PED
 ASH 4,000-150,000 FR AAS USG
 ASPARTIC-ACID 1,170-8,586 FR USA
 BARIUM 0.045-30 FR USG
 BENZYL-ACETATE FR WOI
 BENZYL-ALCOHOL FR WOI
 BENZALDEHYDE FR SD HHB
 BENZALDEHYDECYANHYDRIN SD
 HHB
 BORON 1-150 FR BOB USG
 BROMINE <1 FR AAS
 CADMIUM 0.0003-0.45 FR USG

CAFFEIC-ACID LF WOI
 CAFFEIC-ACID-ESTER LF HHB
 CALCIUM 970 SD SMO
 CALCIUM 18-8,850 FR WOI CRC USG
 CAMPESTEROL SD HHB
 CAMPESTEROL-3-O-BETA-D-
 GLUCOPYRANOSIDE SD ABS
 CAMPESTEROL-3-O-BETA-(6-O-OLEYL)-
 GLUCOPYRANOSIDE SD ABS
 CAMPESTEROL-3-O-BETA-(6-O-
 PALMITYL)-GLUCOPYRANOSIDE SD
 ABS
 CAPRONIC-ACID
 CARBOHYDRATES 111,000-910,000 FR
 CRC
 BETA-CAROTENE 0-30 FR CRC WOI
 CHLOROGENIC-ACID FL LF HHB
 CHROMIUM 0.01-2.25 FR AAS USG
 CHROMIUM 35 BK PED
 CITRIC-ACID FR HHB
 COBALT 20 BK PED
 COBALT <0.005-0.45 FR AAS USG
 COPPER 0.3-30 FR USA USG
 COPPER 10 SD SMO
 P-COUMARIC-ACID LF WOI
 P-COUMARIC-ACID-ESTER LF HHB
 CRYPTOXANTHIN 0.5-10 FH JAF37:657
 CYANIDIN-3-MONOGLUCOSIDE FR
 HHB
 CYSTINE 60-486 FR USA
 A-DECALACTONE FR
 3',5'-DIHYDROXY-4',7'-
 DIMETHOXYFLAVANONE PL JSG
 ETHANOL FR
 ETHYL-ACETATE FR
 ETHYL-BENZOATE FR
 EX DIURETIC LD50:1,000+ IPR MUS
 MPI
 FAT 399,000-456,000 SD WOI
 FAT 860-18,000 FR CRC USA
 FERULIC-ACID PL JLS58:131
 FIBER 6,210-162,000 FR CRC WOI USA
 FIBER 148,000 SD WOI
 FLAVONOL-GYLCOSIDES
 7,500-10,400 LF
 FLAVONOL-GLYCOSIDES 10 FR
 FLUORINE 0.1-0.8 FR AAS
 FOLACIN 0.031-0.303 FR USA
 FORMIC-ACID FR HHB
 D-GALACTOSE GUM
 GIBBERELLIN-A-5 PL JSG
 GIBBERELLIN-A-32 SD CCO
 GIBBERELLIN-A-32-ACETONIDE PL JSG
 GLUCOSE SD ABS
 D-GLUCURONIC-ACID
 GLUTAMIC-ACID 1,060-8,586 FR USA
 GLYCINE 240-1,944 FR USA
 HCN LF WOI
 HENTRIACONTANE LF HHB
 GAMMA-HEPTALACTONE FR WOI
 GAMMA-HEXALACTONE FR WOI
 HEXANOIC-ACID FR WOI
 TRANS-2-HEXENYL-ACETATE FR WOI
 HEXYL-ACETATE FR WOI
 HEXYL-FORMATE FR WOI
 HISTIDINE 130-1,053 FR USA
 IRON 117 BK PED
 IRON 80 SD SMO
 IRON 1-99 FR WOI USA USG
 ISOLEUCINE 200-1,620 FR USA
 ISOVALERIANIC-ACID FR HHB
 KAEMPFEROL LF WOI
 KAEMPFEROL-3-GALACTOSIDE
 KAEMPFEROL-3-GLUCOSIDE
 KAEMPFEROL-3-RHAMNOSIDE PL JSG
 LEAD 0.3-3 FR USG
 LEUCINE 400-3,240 FR USA
 LINOLEIC-ACID 440-3,565 FR USA
 LINOLEIC-ACID SD HHB
 LINOLENIC-ACID 10-80 FR USA
 LITHIUM 0.06-0.6 FR USG
 LUTEIN 0.14-2.8 FR JAF37:657
 LYCOPENE FR HH
 LYSINE 230-1,863 FR USA
 MAGNESIUM 4,220 BK PED
 MAGNESIUM 3,810 SD SMO
 MAGNESIUM 68-850 (-4,500) FR AAS
 USA USG 1/
 L-MALIC-ACID FR HHB
 MALONIC-ACID FR HHB
 MANGANESE 54 BK PED
 MANGANESE 17 SD SMO
 MANGANESE 0-22.5 FR USA USG
 MERCURY 0.00015-0.007 FR AAS USG
 METHIONINE 170-1,377 FR USA
 METHYL-ACETATE FR WOI
 24-METHYLENE-CYCLOARTANOL SD
 METHYL-FRUCTOFURANOSIDE SD
 ABS
 METHYL-GALLATE FL CCO
 METHYL-GLUCOPYRANOSIDE SD ABS
 4-ALPHA-METHYLSTIGMASTA-
 7,Z,24(28)-DIEN-3-BETA-OL SD ABS
 MOLYBDENUM <0.1-1.05 FR AAS USG
 MUCIC-ACID FH HHB
 MUFA 340-2,755 FR USA
 MULTIFLORIN-A FL CCO
 MULTIFLORIN-B FL CCO

MULTINOSIDE-A FL CCO
 MULTINOSIDE-B FL CCO
 NARINGENIN HHB
 NIACIN 10-82 FR USA
 NICKEL 0.15-4.5 FR USG
 NITROGEN 1,400-13,075 FR AAS
 GAMMA-NONALACTONE FR WOI
 GAMMA-OCTALACTONE
 OLEIC-ACID SD HHB
 OLEIC-ACID 340-2,755 FR USA
 OXALIC-ACID 10 HHB
 PALMITIC-ACID 90-730 FR USA
 PALMITIC-ACID SD HHB
 PALMITOLEIC-ACID 10-80 FR USA
 PANTOTHENIC-ACID 2-14 FR USA
 PECTINS 8,600 FR WOI
 PENTANOIC-ACID FR WOI
 PENTYL-ACETATE FR WOI
 PHENYLALANINE 220-1,782
 PHOSPHORUS 3,150 BK PED
 PHOSPHORUS 90-2,000 (-7,200) FR AAS
 CRC WOI USA USG
 PHYTIN-PHOSPHORUS 10 FR WOI
 PHYTOSTEROLS 100-810 FR USA
 POTASSIUM 19,400 BK PED
 POTASSIUM 7,010 SD SMO
 POTASSIUM 1,275-22,072 (-64,500) FR
 CRC WOI USA USG
 PROLINE 290-2,349 FR USA
 PROTEIN 6,850-63,000 FR WOI USA
 PROTEIN 239,000-312,000 SD CRC WOI
 PRUNASIN SD ABS
 PUFA 450-3,645 FR USA
 QUERCETIN PL JLS58:131
 QUERCETIN-3-DIGLUCOSIDE FR LF
 ABS
 QUERCETIN-3-GALACTOSIDE FR LF
 ABS
 QUERCETIN-3-GLUCOSIDE FR LF ABS
 QUERCETIN-3-RHAMNOSIDE FR LF
 ABS
 QUERCETIN-3-RUTINOSIDE FR ABS
 QUERCITRIN FL LF
 QUINIC-ACID LF HHB
 L-RHAMNOSE (2%GUM)
 RIBOFLAVIN 1-4 FR USA
 SELENIUM 13 BK PED
 SELENIUM 0.000075-0.003 FR USG
 SERINE 320-2,592 FR USA
 SFA 100-810 FR USA
 SILICON TR BK PED
 SILICON 4-30 FR AAS
 SILVER 0.015-0.30 FR USA
 BETA-SITOSTEROL LF HHB

SODIUM TR BK PED
 SODIUM 0-366 FR USA USG
 SODIUM 29 SD SMO
 SQUALENE SD HHB
 STARCH 36,000 SD WOI
 STEARIC-ACID 10-80 FR USA
 STEARIC-ACID SD HHB
 STIGMASTEROL SD HHB
 STRONTIUM 0.225-45 FR USG
 SUCROSE 20,000-100,000 FR
 SULFUR 3-700 FR AAS WOI USG
 TANNIN 8,000 LF FR HHB
 THIAMIN 1-2 FR USA
 THREONINE 270-2,187 FR USA
 TIN 9.4 BK PED
 TITANIUM 0.075-30 FR USA
 ALPHA-TOCOPHEROL 10-86 FR TOT
 TRIFOLIN FL WOI
 TRIOLEIN SD ABS
 TRYPTOPHAN 20-162 FR USA
 TYROSINE 180-1,458 FR USA
 URSOLIC-ACID LF HHB
 VALINE 380-3,078 FR USA
 VIT-B6 0.2-1.6 FR USA
 WATER 792,000 BK PED
 WATER 835,000-964,000 FR USG
 D-XYLOSE GUM WOI
 ZEAXANTHIN FR LF
 ZINC TR BK PED
 ZINC 31 SD SMO
 ZINC 0.45-37.5 FR USA USG
 ZIRCONIUM 0.3-4.5 FR USG

AAS=ACTA AGRIC SCAND SUPPL
 22:1980 H2O=87%; ZMB = 7.69 X APB

PRUNUS SEROTINA EHRH.

"BLACK CHERRY"

ACETYLCHOLINE ABS
 ALUMINUM 0-540 ST USG
 ALUMINUM 14-1,440 LF USG
 ASH 1,900-54,000 ST USG
 ASH 29,000-96,000 LF USG
 BARIUM 6-810 ST USG
 BARIUM 1-960 LF USG
 BENZALDEHYDE BK 411/
 BORON 0-54 ST USG
 BORON 2-48 LF USG
 CAFFEIC-ACID PL JLS58:131
 CALCIUM 323-18,360 ST USG
 CALCIUM 4,060-32,640 LF USG
 CHROMIUM 0-0.81 ST USG
 CHROMIUM 0-2.88 LF USG

COBALT 0-5.4 ST USG
 COPPER 1.3-378 ST USG
 COPPER 0.8-29 LF USG
 P-COUMARIC-ACID BK AYL
 CYANIDIN PL JLS58:131
 2-ALPHA-3-ALPHA-DIHYDROXYURS-12-
 EN-28-OIC-ACID LF CCO
 EMULSIN BK AYL
 EUDESMIC-ACID BK AYL
 BETA-GLYCOSIDASE SD ABS
 HCN 500-1,500 BK AYL
 HCN 2,500 LF AYL
 IRON 0.19-810 ST USG
 IRON 20-1,440 LF USG
 KAEMPFEROL PL JLS58:131
 LANTHANUM 0.06-16 ST USG
 LANTHANUM 0.8-19 LF LF USG
 LEAD 0.2-108 ST USG
 LEAD 0.3-67 LF USG
 MAGNESIUM 28-5,400 ST USG
 MAGNESIUM 435-9,600 LF USG
 MOLYBDENUM 0-0.19 ST USG
 MOLYBDENUM 0-1.9 LF USG
 NEODYMIUM 2-19 LF USG
 NICKEL 0-2.7 ST USG
 NICKEL 0-6.7 LF USG
 PHOSPHORUS 114-2,592 ST USG
 PHOSPHORUS 261-4,608 LF USG
 POTASSIUM 80-15,120 ST USG
 POTASSIUM 1,624-26,880 LF USG
 PRUNASIN BK 411/
 QUERCETIN PL JLS58:131
 SCOPOLETIN BK HHB
 SILVER 0-0.1 ST USG
 SILVER 0-0.48 LF USG
 STRONTIUM 0.5-378 ST USG
 STRONTIUM 8-480 ST USG
 TANNIN BK HHB
 TITANIUM 0.02-38 ST USG
 TITANIUM 0.6-144 LF USG
 3,4,5-TRIMETHOXYBENZOIC-ACID BK
 411/
 URS-12-EN-28-AL-3-BETA-OL FL CCO
 URSOLIC-ACID LF CCO
 VANADIUM 0-1.6 ST USG
 VANADIUM 0.14-4.8 LF USG
 YTTERBIUM 0-0.27 ST USG
 YTTERBIUM 0.05-0.67 LF USG
 YTTRIUM 0.001-3.78 ST USG
 YTTRIUM 0.14-14.4 LF USG
 ZINC 0.5-216 ST USG
 ZINC 3-192 LF USG
 ZIRCONIUM 0.04-1.6 ST USG
 ZIRCONIUM 0.6-6.7 LF USG

PRUNUS SPINOSA L.

“SLOE; BLACKTHORN”

AMYGDALIN FL HHB
 AMYGDALIN SD HHB
 CAFFEIC-ACID PL JLS58:130
 CYANIDIN PL JLS58:130
 EMULSIN SD HHB
 FERULIC-ACID PL JLS58:130
 HYPEROSIDE FL HHB
 KAEMPFERIN
 KAEMPFEROL FL HHB
 KAEMPFEROL-3-O-ALPHA-L-
 ARABOFURANOSIDE LF HHB
 KAEMPFEROL-4'-ARABINOSIDE LF
 HHB
 KAEMPFEROL-3-ALPHA-L-
 ARABOFURANOSIDE-7-ALPHA-L-
 RHAMNOFURANOSIDE LF HHB
 KAEMPFEROL-3,7-ALPHA-L-
 DIRHAMNOFURANOSIDE LF HHB
 KAEMPFEROL-3-O-ALPHA-L-
 RHAMNOFURANOSIDE LF HHB
 KAEMPFEROL-7-O-ALPHA-L-
 RHAMNOFURANOSIDE LF HHB
 NONACOSANE SD HHB
 10-NONACOSANOL SD HHB
 PECTIN FR HHB
 PRUNICYANIN FR HHB
 QUERCETIN FL HHB
 QUERCETIN-3-O-ALPHA-L-
 ARABOFURANOSIDE LF HHB
 QUERCITRIN FL HHB
 RUTIN FL HHB
 BETA-SITOSTEROL FR HHB
 TANNIN FR HHB

PSIDIUM CATTLEIANUM

SABINE

“STRAWBERRY GUAVA”

ALANINE 290-1,500 FR USA
 ARGININE 150-775 FR USA
 ASCORBIC-ACID 150-2,100 FR CRC USA
 ASH 5,000-44,000 FR CRC USA
 ASPARTIC-ACID 370-1,915 FR USA
 CALCIUM 210-3,400 FR CRC USA
 CARBOHYDRATES 145,000-939,000 FR
 CRC USA
 BETA-CAROTENE 0-9 FR CRC USA
 CYANIDIN PL JLS58:147
 ELLAGIC-ACID PL JLS58:147
 FAT 3,000-33,000 FR CRC USA

FIBER 52,000-352,000 FR CRC USA
 GLUTAMIC-ACID 760-3,930 FR USA
 GLYCINE 290-1,500 FR USA
 HISTIDINE 50-260 FR USA
 IRON 2-82 FR CRC USA
 ISOLEUCINE 210-1,085 FR USA
 KAEMPFEROL PL JLS58:147
 KILOCALORIES 560-3,570 FR CRCUSA
 LEUCINE 390-2,015 FR USA
 LINOLEIC-ACID 1,820-9,410 FR USA
 LINOLENIC-ACID 710-3,670 FR USA
 LYSINE 160-825 FR USA
 MAGNESIUM 170-880 FR USA
 METHIONINE 40-205 FR USA
 MUFA 550-2,845 FR USA
 MYRISTIC-ACID 120-620 FR USA
 NIACIN 3-38 FR CRC USA
 OLEIC-ACID 520-2,690 FR USA
 PALMITIC-ACID 1,440-7,445 FR USA
 PALMITOLEIC-ACID 30-155 FR USA
 PHENYLALANINE 10-50 FR USA
 PHOSPHORUS 170-2,305 FR CRC USA
 POTASSIUM 2,890-15,880 FR CRC USA
 PROLINE 180-930 FR USA
 PROTEIN 4,000-55,000 FR CRC USA
 PUFA 2,530-13,080 FR USA
 QUERCETIN PL JLS58:147
 RIBOFLAVIN 0.2-1.9 FR CRC USA
 SERINE 170-880 FR USA
 SFA 1,720-8,900 FR USA
 SODIUM 40-1,915 FR CRC USA
 STEARIC-ACID 160-825 FR USA
 THIAMIN 0.2-1.9 FR CRC USA
 THREONINE 220-1,140 FR USA
 TRYPTOPHAN 50-260 FR USA
 TYROSINE 70-360 FR USA
 VALINE 200-1,035 FR USA
 WATER 783,200-843,000 FR CRCUSA

PSIDIUM GUAJAVA L.

"GUAVA"

ACETONE FR HHB
 ALANINE 410-2,952 FR USA
 AMRITOSIDE LF WOI
 ARABAN FR HHB
 ARABINOSE FR HHB
 ARABINOSE-
 HEXAHYDROXYDIPHENYL-ACID—
 ESTER 1,000 FR HHB
 ARGININE 210-1,512 FR USA
 ARJUNOLIC-ACID RT CCO
 AROMADENDRENE LF JFM
 ASCORBIC-ACID 200-14,300 FR USA

ASCORBIGEN 253-2,145 FR WOI
 ASH 30,000 SD WOI
 ASH 6,000-43,200 FR USA
 ASPARTIC-ACID 520-3,744 FR USA
 AVICULARIN LF CCO
 BENZALDEHYDE FR HHB
 BENZENE FR HHB
 BETA-BISABOLENE FR CCO
 BUTANAL FR HHB
 DELTA-CADINENE FR CCO
 CALCIUM 180-1,582 FR USA
 CALCIUM-OXALATE LF HHB
 CARBOHYDRATES 118,800-855,360 FR
 USA
 BETA-CAROTENE 3-46 FR USA
 BETA-CARYOPHYLLENE FR CCO
 CARYOPHYLLENE-OXIDE LF JFM
 CATECHOL-TANNINS 40,000-75,000 LF
 WOI
 CHLORINE 40 FR WOI
 CINNAMYLACETATE FR HHB
 CITRAL FR HHB
 CITRIC-ACID FR HHB
 BETA-COPAENE FR CCO
 COPPER 1-9 FR USA
 CRATAEGOLIC-ACID LF WOI
 ELLAGIC-ACID 8,000 BK HHB
 ELLAGIC-ACID FR BK HHB
 EO 2,600-3,600 LF HHB WOI
 BETA-FARNESENE FR CCO
 FAT 6,000-43,200 FR USA
 FAT 60,000 LF HHB
 FAT 100,000-143,000 SD HHB WOI
 FIBER 56,000-403,200 FR USA
 FIBER 424,000 SD WOI
 FRUCTOSE FR HHB
 D-GALACTOSE FR WOI
 D-GALACTURONIC-ACID FR WOI
 GALLIC-ACID FR WOI
 GALLOYL-TANNIN RT HHB
 GLUCOSE 1,000 SD WOI
 GLUTAMIC-ACID 1,070-7,704 FR USA
 GLYCINE 410-2,952 FR USA
 GUAFINE 20,000 BK HHB
 GUAJIVERINE LF HHB
 GUAJIVOLIC-ACID LF WOI
 HISTIDINE 70-504 FR USA
 ALPHA-HUMULENE FR CCO
 BETA-HUMULENE FR CCO
 2ALPHA-HYDROXYURSOLIC-ACID
 BETA-IONONE FR HHB
 IRON 3-24 FR USA
 ISOLEUCINE 300-2,160 FR USA
 KILOCALORIES 510-3,670 FR USA

LACTIC-ACID FR HHB
 LEUCINE 550-3,960 FR USA
 LEUCOANTHOCYANIN BK HHB
 LEUCOCYANIDINS 1,000 FR HHB WOI
 LEUCOCYANIDINS 4,000 LF HHB WOI
 LIMONENE FR CCO
 LINOLEIC-ACID 1,820-13,104 FR USA
 LINOLEIC-ACID 13,900 SD WOI
 LINOLENIC-ACID 200 SD WOI
 ALPHA-LINOLENIC-ACID 710-5,112 FR USA
 LUTEIC-ACID BK HHB
 LYSINE 230-1,656 FR USA
 MAGNESIUM 98-735 FR USA
 L-MALIC-ACID FR HHB
 MANGANESE 1-12 FR USA
 MECOCYANIN FR WOI
 METHIONINE 50-360
 METHYLCINNAMATE FR HHB
 METHYLISOPROPYLKETONE FR HHB
 MUFA 550-3,955 FR USA
 MYRICETIN BK HHB
 MYRISTIC-ACID 120-864 FR USA
 NEROLIDIOL LF JFM
 NIACIN 12-86 FR USA
 OLEANOLIC-ACID LF WOI
 OLEIC-ACID 27,900 SD WOI
 OLEIC-ACID 520-3,744 FR USA
 OXALIC-ACID 140 FR WOI
 PALMITIC-ACID 1,440-10,368 FR USA
 PALMITOLEIC-ACID 30-216 FR USA
 PANTOTHENIC-ACID 2-11 FR USA
 PECTIN 3,000-16,000 FR WOI
 PHENYLALANINE 20-144 FR USA
 PHOSPHORUS 235-1,905 FR USA
 PHYTIN-PHOSPHORUS 127-1,029 FR WOI
 BETA-PINENE FR CCO
 POTASSIUM 2,672-21,658 FR USA
 PROLINE 250-1,800 FR USA
 PROTEIN 152,000 SD WOI
 PROTEIN 8,200-59,000 FR USA
 PSIDIOLIC-ACID LF HHB
 PUFA 2,530-18,200 FR USA
 PYROGALLOL-TANNINS 135,000 BK HHB
 PYROGALLOL-TANNINS 40,000-78,000 LF HHB WOI
 QUERCETIN LF WOI
 RHAMNOSE FR HHB
 RIBOFLAVIN 1-4 FR USA
 ALPHA-SELINENE FR CCO
 BETA-SELINENE FR CCO
 SEL-11-EN-4ALPHA-OL LF JFM

SERINE 240-1,728 FR USA
 SESQUIGUAVENE PL JSG
 SFA 1,720-12,375 FR USA
 BETA-SITOSTEROL LF WOI
 SODIUM 26-246 FR USA
 STARCH 132,000 SD WOI
 STEARIC-ACID 160-1,152 FR USA
 SUCROSE FR HHB
 SUGAR LF WOI
 SULFUR 140 FR WOI
 TANNIN 110,000-300,000 BK JFM HHB WOI
 TANNIN 90,000-100,000 LF JFM
 TANNINS 14,000 SD WOI
 THIAMIN 1-4 FR USA
 THREONINE 310-2,232 FR USA
 TRYPTOPHAN 70-504 FR USA
 TYROSINE 100-720 FR USA
 URSOLIC-ACID LF WOI
 VALINE 280-2,016 FR USA
 VIT-B6 1-10 FR USA
 WATER 103,000 SD WOI
 WATER 854,000-868,000 FR USA
 WAX LF WOI
 XANTHOPHYLL LF WOI
 XYLOSE FR HHB
 ZINC 2-20 FR USA

PSOPHOCARPUS

TETRAGONOLOBUS (L.) DC.

“WINGED BEAN; GOA BEAN;
 ASPARAGUS PEA”

ALANINE 1,720-7,430 LF USA
 ALANINE 10,400-11,346 SD USA
 ALANINE 3,970-9,319 TU USA
 ARGININE 1,780-7,689 LF USA
 ARGININE 18,860-20,576 SD USA
 ARGININE 4,120-9,671 TU USA
 ASCORBIC-ACID 190 FR WOI
 ASCORBIC-ACID 0 SD USA
 ASH 19,000-99,360 LF USA
 ASH 6,120-80,863 SD USA
 ASH 20,000-46,948 TU USA
 ASPARTIC-ACID 5,170-22,333 LF USA
 ASPARTIC-ACID 31,870-34,770 SD USA
 ASPARTIC-ACID 17,350-40,728 TU USA
 CALCIUM 1,845-11,383 LF USA
 CALCIUM 567-8,586 SD USA
 CALCIUM 300-704 TU USA

CARBOHYDRATES 141,000-609,071 LF USA	LYSINE 2,280-9,849 LF USA
CARBOHYDRATES 43,100-455,051 SD USA	LYSINE 21,360-23,304 SD USA
CARBOHYDRATES 281,000-659,624 TU USA	LYSINE 5,920-13,897 TU USA
BETA-CAROTENE 4 FR WOI	MAGNESIUM 80-346 LF USA
BETA-CAROTENE 0.78-6 SD USA	MAGNESIUM 340-2,623 SD USA
COPPER 28-33 SD USA	MANGANESE 34-44 SD USA
CYSTINE 750-3,240 LF USA	METHIONINE 640-2,765 LF USA
CYSTINE 5,450-5,946 SD USA	METHIONINE 3,560-3,884 SD USA
CYSTINE 1,970-4,624 TU USA	METHIONINE 1,430-3,357 TU USA
ERUCIC-ACID 20-86 LF USA	MUFA 2,850-12,312 LF USA
ERUCIC-ACID 20-154 SD USA	MUFA 2,500-65,590 SD USA
ERUCIC-ACID 10-23 TU USA	MUFA 2,340-5,493 TU USA
FAT 11,000-47,520 LF USA	MYRISTIC-ACID 10-43 LF USA
FAT 5,430-180,020 SD USA	MYRISTIC-ACID 10-305 SD USA
FAT 9,000-21,127 TU USA	NIACIN 9-69 SD USA
FIBER 25,000-216,000 LF USA	OLEIC-ACID 2,840-12,268 LF USA
FIBER 21,980-227,005 SD USA	OLEIC-ACID 2,480-61,684 SD USA
FIBER 74,000-173,709 TU USA	OLEIC-ACID 2,320-5,446 TU USA
FOLACIN 0.4-0.5 SD USA	PALMITIC-ACID 760-3,283 LF USA
GADOLEIC-ACID 3,030-3,306 SD USA	PALMITIC-ACID 660-13,692 SD USA
GLUTAMIC-ACID 3,890-16,803 LF USA	PALMITIC-ACID 620-1,455 TU USA
GLUTAMIC-ACID 40,100-43,749 SD USA	PHENYLALANINE 1,880-8,121 LF USA
GLUTAMIC-ACID 8,000-18,779 TU USA	PHENYLALANINE 14,290-15,590 SD USA
GLYCINE 1,490-6,436 LF USA	PHENYLALANINE 4,510-10,587 TU USA
GLYCINE 11,400-12,437 SD USA	PHOSPHORUS 525-3,175 LF USA
GLYCINE 3,900-9,155 TU USA	PHOSPHORUS 334-5,058 SD USA
HCN ST WOI	PHOSPHORUS 450-1,056 TU USA
HISTIDINE 820-3,542 LF USA	POTASSIUM 1,760-7,602 LF USA
HISTIDINE 7,900-8,618 LF USA	POTASSIUM 2,014-18,873 SD USA
HISTIDINE 2,410-5,657 TU USA	PROLINE 1,680-7,257 LF USA
IRON 20-259 LF USA	PROLINE 19,240-20,991 SD USA
IRON 15-158 SD USA	PROLINE 6,790-15,939 TU USA
IRON 20-47 TU USA	PROTEIN 58,000-254,880 LF USA
ISOLEUCINE 2,040-8,812 LF USA	PROTEIN 39,760-765,738 SD USA
ISOLEUCINE 14,680-16,016 SD USA	PROTEIN 116,000-272,300 TU USA
ISOLEUCINE 4,250-9,976 TU USA	PUFA 2,130-9,201 LF USA
KILOCALORIES 740-3,197 LF USA	PUFA 1,860-47,240 SD USA
KILOCALORIES 490-4,462 SD USA	PUFA 1,740-4,085 TU USA
KILOCALORIES 1590-3,732 TU USA	RIBOFLAVIN 1-7.7 SD USA
LEUCINE 3,590-15,508 LF USA	SERINE 1,490-6,436 LF USA
LEUCINE 24,970-27,242 SD USA	SERINE 12,350-13,474 SD USA
LEUCINE 6,400-15,023 TU USA	SERINE 4,640-10,892 TU USA
LINOLEIC-ACID 1,870-8,078 LF USA	SFA 2,720-11,750 LF USA
LINOLEIC-ACID 1,640-44,381 SD USA	SFA 2,380-25,125 SD USA
LINOLEIC-ACID 1,530-3,592 TU USA	SFA 2,220-5,211 TU USA
ALPHA-LINOLENIC-ACID 260-1,123 LF USA	SODIUM 31-429 SD USA
ALPHA-LINOLENIC-ACID 230-2,858 SD USA	STEARIC-ACID 440-1,901 LF USA
ALPHA-LINOLENIC-ACID 210-493 TU USA	STEARIC-ACID 7,450-8,128 SD USA
	STEARIC-ACID 360-845 TU USA
	THIAMIN 1.4-11.2 SD USA
	THREONINE 1,820-7,862 LF USA

THREONINE 11,790-12,863 SD USA
 THREONINE 4,510-10,587 TU USA
 TRYPTOPHAN 1,160-5,011 LF USA
 TRYPTOPHAN 7,620-8,313 SD USA
 TRYPTOPHAN 2,520-5,915 TU USA
 TYROSINE 1,260-5,443 LF USA
 TYROSINE 14,570-15,896 SD USA
 TYROSINE 3,530-8,286 TU USA
 VALINE 2,450-10,583 LF USA
 VALINE 15,300-16,692 SD USA
 VALINE 5,990-14,061 TU USA
 VIT-B6 1.1-8.7 SD USA
 WATER 758,000-779,000 LF USA
 WATER 79,780-882,930 SD USA
 WATER 574,000 TU USA
 ZINC 43-51 SD USA

PSORALEA CORYLIFOLIA L.

“BABCHI”

“BLACK DOT”

“MALAYA TEA”

ANGELICIN SD MPI
 BAKUCHALKONE SD MPI
 BAKUCHIOL SD HHB
 BAVACHALKONE SD HHB
 BAVACHIN SD HHB
 BAVACHININ SD HHB
 BAVACHROMANOL SD MPI
 BAVACHROMENE SD HHB
 BETA-CARYOPHYLLENE-OXIDE SD
 MPI
 CORYLIDINE SD MPI
 CORYLIFOLEAN SD MPI
 CORYLIN SD MPI
 CORYLNAL SD MPI
 COUMARIN SD EB41:524
 COUMESTROL RT MPI
 DAIDZEIN RT MPI
 4',5'-(2,2"-DIMETHYLCHROMENO)-
 ISOLIQUIRITIGENIN SD MPI
 ALPHA-ELEMENE SD MPI
 EO 500-200,000 SD HHB WOI
 FAT 100,000 SD WOI
 5'-FORMYL-2',4-DIHYDROXY-4'-
 METHOXY-CHALCONE
 GERANYL-ACETATE SD MPI
 ISOBAVACHALKONE SD HHB
 ISOBAVACHIN SD HHB
 ISONEOBAVACHALKONE SD MPI
 ISOPSORALEN 500 SD HHB
 ISOPSORALIDIN SD WOI
 LIMONENE SD MPI

LINALOOL SD MPOI
 4-O-METHYLBAVACHALCONE SD MPI
 7-O-METHYLBAVACHIN SD MPI
 NEOBAVACHALKONE SD MPI
 NEOBAVAISOFLAVONE SD MPI
 3-C-PRENYL-DAIDZEIN SD MPI
 PSORALEN SD HHB
 PSORALENOL SD MPI
 PSORALIDENE FR HHB
 PSORALIDIN SD WOI
 PSORALIDIN-2,3'-OXIDE-DIACETATE
 SD MPI
 RAFFINOSE SD WOI
 RESIN 86,000 SD WOI
 SITOSTEROL RT MPI
 BETA-SITOSTEROL-D-GLUCOSIDE SD
 MPI
 STIGMASTEROL SD WOI
 4-TERPINEOL SD MPI
 TRIACONTANE SD MPI
 TRILAURIN RT MPI

PSORALEA ESCULENTA PURSH.

“INDIAN BREAD-ROOT”

ALANINE 1,139 RT 457/
 ARGININE 7,976 RT 457/
 ASCORBIC-ACID 4-171 RT 457/
 SN139:317
 ASPARTIC-ACID 8,989 RT 457/
 CALCIUM 5,100 RT 457/
 BETA-CAROTENE 0-1 RT 457/
 CYSTINE-(half) 802 RT 457/
 GLUTAMIC-ACID 12,319 RT 457/
 FAT 36,800 RT 457/
 FIBER 160,300 RT 457/
 GLYCINE 1,097 RT 457/
 GLUTAMIC ACID 4,093 RT 457/
 HISTIDINE 1,266 RT 457/
 IRON 39 RT 457/
 ISOLEUCINE 1,308 RT 457/
 LEUCINE 2,448 RT 457/
 LYSINE 2,743 RT 457/
 MAGNESIUM 1,400 RT 457/
 METHIONINE 253 RT 457/
 PHENYLALANINE 1,224 RT 457/
 PHOSPHORUS 500 RT 457/
 POTASSIUM 2,800 RT 457/
 PROLINE 1,266 RT 457/
 PROTEIN 70,000-422,000 RT 457/
 SN139:317
 SERINE 1,857 RT 457/
 STARCH 698,400 RT 457/

SUGARS 56,000 RT 457/
 THREONINE 1,477 RT 457/
 TRYPTOPHAN 633 RT 457/
 TYROSINE 1,899 RT 457/
 VALINE 1,730 RT 457/
 WATER 569,800 RT 457/

***PTERIDIUM AQUILINUM* (L.)**

KUHN

“BRACKEN” “BRACKEN FERN”

ACETYLPTEROSINS LF CCO
 ANEURINASE PL WBB
 AQUILIDE-A PL JSG
 ARABINOSE PL ABS 1/
 ASH 6,000-68,965 LF WOI
 ASH 83,000-92,222 RH WOI
 BENZOIC-ACID PL
 BENZOYLPTEROSINS RH CCO
 CAFFEIC-ACID PL
 5-O-CAFFELOYLSHIKIMIC-ACID LF CCO
 D-CAFFEYL-TARTARIC-ACID PL
 CARBOHYDRATES 56,000-643,678 LF WOI
 CARBOHYDRATES 510,000-566,666 RH WOI
 BETA-CAROTENE 1 LF WOI
 P-COUMARIC-ACID LF HHB
 CAOUTCHOUC PL WBB
 CATECHOL-TANNIN 66,000 RH WOI
 CHICORIC-ACID PL
 CINNAMIC-ACID PL
 P-COUMARIC-ACID PL
 ALPHA-ECDYSONE LF HHB
 EO 1,800 RH HHB
 FAT 1,000-11,494 LF WOI
 FAT 12,000-13,333 RH WOI
 FERULIC-ACID PL
 FIBER 14,000-160,919 LF WOI
 FIBER 200,000-222,222 RH WOI
 FUCOSE PL
 FUMARIC-ACID LF HHB
 GALACTOSE PL
 GALACTURONIC-ACID PL
 GLUCOSE PL
 GLUCURONIC-ACID PL
 HCN 560 LF HHB
 HCN PL WBB
 20-HYDROXYECDYSONE LF HHB
 IODINE 0.9 LF WOI
 ISOCROTONYLPTEROSINS LF CCO
 ISOQUERCITRIN PL
 KAEMPFEROL-3-GLUCOSIDE PL

KAEMPFEROL-3-RHAMNOGLUCOSIDE PL
 MANNOSE PL
 PALMITYLPTEROSINS LF CCO
 PHENYLACETYLPTEROSINS LF CCO
 PHENYLALANINE-AMMONIA-LYASE PL
 PONASTEROSIDE-A PL CCO
 PROCYANIDIN PL
 PRODELPHINIDIN PL
 PROTEIN 10,000-114,942 LF WOI
 PROTEIN 95,000-105,555 RH WOI
 PROTOCATECHUIC-ACID PL
 PRUNASIN 1,580 LF WOI
 PTAQUILOSIDE PL JSG
 PTERAQUILIN RH WOI
 PTERIDINE PL
 PTEROLACTAM PL CCO
 PTEROSIDE-A LF CCO
 PETROSIDE-A RH CCO
 PTEROSINS PL JSG
 PTEROSIDES PL JSG
 QUERCETIN PL
 RHAMNOSE PL
 RUTIN PL
 SHIKIMIC-ACID PL
 STARCH 450,000 RH HHB
 SUCCINIC-ACID PL HHB
 SUGARS 67,000-213,000 RH HHB WOI
 SULPHOQUINOVOSE PL
 TANNIN PL WBB
 THIAMINASE-I PL
 TILIROSIDE PL HHB
 2,4,6-TRIMETHYL-3-OXO-5-INDANACETIC-ACID PL JSG
 VANILLIC-ACID PL
 WATER 913,000 LF WOI
 XYLOSE PL

1/ Most data from Perring, F.H. and Gardiner, B.G., eds. 1976. *The Biology of Bracken*. Bot. J. Linn. Soc. 73 (1,2 & 3): 301 pp.

PTEROCARPUS MARSUPIUM
 ROXB.

“INDIAN KINO”

“MALABAR KINO”

ALKALOIDS 170 WD WOI
 ASH 75,000 LF WOI
 CARPUSIN WD MPI
 CATECHOL WD WOI
 5-DEOXYKAEMPFEROL RT WOI

7,4'-DIHYDROXYFLAVONE WD MPI
 5,7-DIHYDROXY-6-METHOXY-7-O-
 ALPHA-RHAMNOPYRANOSIDE WD
 MPI
 L-EPICATECHIN BK WOI
 ERYTHRODIOL-3-MONOACETATE RT
 MPI
 BETA-EUDESOL RT MPI
 GALLIC-ACID WD WOI
 GARBANZOL RT MPI
 C-GLYCOSYL-BETA-HYDROXY-
 DIHYDROCHALKONE RT MPI
 P-HYDROXYBENZALDEHYDE RT MPI
 7-HYDROXY-5,4'-DIMETHOXY-8-
 METHYLISOFLAVONE-7-
 RHAMNOSIDE PL JSG
 (2S)-7-HYDROXYFLAVANONE WD MPI
 IRISOLIDOL-7-O-BETA-D-
 GLUCOPYRANOSIDE PL JSG
 ISOLQUIRITIGENIN WD WOI
 KINOIN RE WOI
 KINORED WD WOI
 KINOTANNIC-ACID 250,000-800,000 RE
 WOI
 LIQUIRITIGENIN WD WOI
 MARSUPINOL WD MPI
 MARSUPOL WD MPI
 MUCILAGE PL MPI
 NITROGEN 25,000 LF WOI
 PECTIN WD WOI
 PENTOSAN PL MPI
 PHLOBAPHENE WD WOI
 PHOSPHORIC-ACID 4,000 LF WOI
 POTASH 25,000 LF WOI
 PROPTEROL WE MPI
 PROTOCATECHUIC-ACID WD WOI
 PSEUDOBAPTIGENIN RT WOI
 PTEROSTILBENE RT MPI
 PTEROSUPIN RT MPI
 RESIN 9,000 WD WOI
 RETUSIN-7-O-BETA-
 GLUCOPYRANOSIDE WD MPI
 SELIN-4(15)-EN-1-BETA,11-DIOL RT
 MPI
 3,7,4'-TRIHYDROXYFLAVONE WD
 MPI
 WATER 788,000 LF WOI

PTEROCARPUS SANTALINUS L. f.

“RED SAUNDERS”

ACETYLOLEANOLALDEHYDE WD
 HHB
 ACETYL-OLEANOLIC-ACID WD HHB

BETA-AMYRIN PL JSG
 BETA-AMYRONE PL JSG
 BETULIN BK CCO
 CEDROL 50%EO WD HHB
 CRYPTOMERIDIOL WD HHB
 DESOXYSTANTALIN WD WOI
 EPILUPEOL BK CCO
 ERYTHRODIOL PL JSG
 EO WD HHB
 EUDES-4(15)-ENE-2,11-DIOL PL
 JSG
 BETA-EUDESOL WD WOI
 GALLIC-ACID WD HHB
 HOMOPTEROCARPIN 2,000 WD
 WOI
 ISOPTEROCARPIN WD 411/
 ISOPTEROCARPOLONE WD HHB
 LIQUIRITIGENIN PL CCO
 LUP-20(29)-EN-2ALPHA,3BETA-DIOL
 BK CCO
 LUPENONE BK CCO
 LUPEOL BK CCO
 PTEROCARPDIONE WD HHB
 PTEROCARPIN 2,500 WD WOI
 PTEROCARPOL WD HHB
 PTEROCARPTRIOL WD HHB
 PTEROSTILBENE WD WOI
 SANTAL WD WOI
 SANTALIN 160,000 WD WOI
 SANTALIN-A WD HHB
 SANTALIN-B WD HHB
 BETA-SITOSTEROL PL JSG
 STIGMASTEROL PL JSG

PTYCHOPETALUM OLACOIDES
 BENTH.

“MUIRA PUAMA”

ALKALOIDS 5,000 WD HHB
 ARACHIDIC-ACID PL HHB
 BEHENIC-ACID PL HHB
 CAMPESTEROL PL HHB
 EO 500 WD HHB
 LIGNOCERIC-ACID PL HHB
 LUPEOL PL HHB
 PENTACOSANOIC-ACID PL HHB
 PHLOBAPHENE PL HHB
 ALPHA-RESINIC-ACID 6,000 PL
 HHB
 BETA-RESINIC-ACID 7,000 PL
 HHB
 BETA-SITOSTEROL PL HHB
 TRICHOSANIC-ACID PL HHB
 UNCOSANIC-ACID PL HHB

PUERARIA LOBATA* (WILLD)*OHWI****"KUDZU"**

ASH 14,000-44,600 RT CRC
 CALCIUM 150-475 RT CRC
 CALCIUM 1,600-1,700 SH WOI
 CARBOHYDRATES 271,000-885,350 RT CRC
 CAROTENE 44 SH WOI
 P-COUMARIC-ACID LF HHB
 DAIDZEIN RT WOI
 DAIDZIN RT WOI
 4',7-DIHYDROXYISOFLAVONE PL JSG
 FAT 16,000-35,000 SH WOI
 FAT 1,000-3,185 RT CRC
 FIBER 7,000-22,300 RT CRC
 FIBER 171,000-275,000 SH WOI
 FIBER 462,000 ST WOI
 GENISTEIN LF HHB
 IRISOLIDONE LF HHB
 IRISOLIDONE-7-O-GLUCOSIDE LF HHB
 IRON 6-19 RT CRC
 KILOCALORIES 1,130-3,600 RT CRC
 MAGNESIUM 800-850 SH WOI
 PHOSPHORUS 180-575 RT CRC
 PHOSPHORUS 470-2,440 SH WOI
 POTASSIUM 16,000-36,050 SH WOI
 PROTEIN 21,000-66,890 RT CRC
 PROTEIN 131,000-168,600 SH WOI
 PUERARIN RT WOI
 PUERARIN-7-O-XYLOSIDE RT HHB
 QUERCETIN LF HHB
 RIBOFLAVIN 8 SH WOI
 ROBININ LF HHB
 SILICA 15,000-52,00 SH WOI
 STARCH 130,000-400,000 RT WOI
 TECTORIDIN PL HHB
 WATER 686,000 RT CRC

PUERARIA PSEUDOHIRSUTA**TANG & WANG****"CHINESE KUDZU"**

ACETYLCHOLINE RT CCO
 ALLANTOIN RT CCO
 ARSENIC 0.26 RT CAL 1/
 CALCIUM 5,330-8,300 RT CAL SMO
 COPPER 12-13 RT CAL SMO
 DAIDZEIN RT CCO
 DAIDZIN RT CCO
 FORMONONETIN RT CCO
 GENISTEIN RT CCO

IRON 50-68 RT CAL SMO
 KAKKONEIN RT CCO
 MAGNESIUM 1,470-3,690 RT CAL SMO
 MANGANESE 3-5 RT CAL SMO
 D-MANNITOL RT CCO
 MERCURY 0.04 RT CAL
 MIROESTROL RT CCO
 POTASSIUM 7,370-11,200 RT CAL SMO
 PUERARIN RT CCO
 PUERARIN-7-XYLOSIDE RT CCO
 PUERAROL RT CCO
 SODIUM 57-70 RT CAL SMO
 STARCH 100,000-150,000 RT CCO
 SUCCINIC-ACID RT CCO
 ZINC 21-30 RT CAL SMO

1/This species was mentioned first in CCO

PULSATILLA CHINENSIS**(BUNGE) REGEL****"CHINESE ANEMONE"**

AKEBOSIDE-ST-H RT CCO
 ANEMONIN RT CCO
 ARSENIC 1.14 RT CAL 1/
 CALCIUM 16,200 RT CAL
 COPPER 9 RT CAL
 HEDERAGENIN RT CCO
 HEDERAGENIN-3-O-ALPHA-LRHEMNOPYRANOSYL...PYRANOSIDE RT CCO
 IRON 1,050 RT CAL
 MAGNESIUM 3,190 RT CAL
 MANGANESE 119 RT CAL
 MERCURY 0.22 RT CAL
 OKINALEIN RT CCO
 OKINALIN RT CCO
 POTASSIUM 14,200 RT CAL
 PROTOANEMONIN RT CCO
 RANUNCULIN RT CCO
 SODIUM 213 RT CAL
 ZINC 24 RT CAL

1/ CAL mineral data may apply to this species

PUNICA GRANATUM* L.*"POMEGRANATE"**

ALKALOIDS 1,000-7,000 RT BK HHB
 WOI
 ARACHIDIC-ACID SD HHB
 ASCORBIC-ACID 40-636 FR CRC USA
 ASH 5,000-35,858 FR USA

ASIATIC-ACID FL HHB
 BETULIC-ACID BK LF WOI
 BORIC-ACID 50 FR HHB
 CALCIUM 30-650 FR CRC USA
 CALCIUM-OXALATE 40,000 RIND FR
 WOI
 CARBOHYDRATES 162,000-927,000 FR
 CRC USA
 CAROTENE 0-2 FR CRC WOI
 CASUARIIN BK RAA
 CASUARIIN PL 411/
 CASUARININ BK RAA
 CASUARININ PL 411/
 CEREBROSIDE SD RAA
 CHLORINE 20 FR WOI
 CHLOROGENIC-ACID FR RAA
 CITRIC-ACID 8,100-12,300 FR JU WOI
 COPPER 2 FR WOI
 CORILAGIN LF RAA
 P-COUMARINIC-ACID FR RAA
 CYANIDIN-3-GLUCOSIDE FR RAA
 CYANIDIN-3,5-DIGLUCOSIDE FR RAA
 DELPHINIDIN-3,5-DIGLUCOSIDE PC
 RAA
 DELPHINIDIN-3-GLUCOSIDE FR RAA
 ELAIDIC-ACID 5,500 PC RAA
 ELLAGIC-ACID BK CCO
 ELLAGITANNIN BK 411/
 ESTRADIOL SD RAA
 ESTRONE 17 SD WOI
 FAT 50,000-200,000 SD HHB
 FAT 1,000-38,000 FR CRC USA WOI
 FIBER 2,000-232,000 FR CRC USA
 WOI
 FIBER 224,000 SD WOI
 FLAVOGALLOL PC RAA
 FRIEDELIN BK WOI
 FRUCTOSE FR WOI
 GALLIC-ACID 900-40,000 PC RAA WOI
 2-O-GALLOYLPUNICALIN LF RAA
 GLUCOSE FR WOI
 GRANATIN-A PC RAA
 GRANATIN-B PC RAA
 GRANATINS 15,000 LF RAA
 GUMS 32,000 RIND FR WOI
 INULIN 10,000 RIND FR WOI
 IRON 3-16 FR USA
 ISOPELLETIERINE BK WOI
 ISOQUERCETRIN PC RAA
 LINOLEIC-ACID SD HHB
 MAGNESIUM 120 FR WOI
 MALIC-ACID FR WOI
 MALVIDIN FR RAA
 MALTOSE FR WOI

MALVIDIN-PENTOSE-GLYCOSIDE FR
 JU WOI
 MANNITOL 18,000 PC WOI
 D-MANNITOL SD LF ST RT BK
 MASLINIC-ACID FL HHB
 METHYL-ISOPELLETIERINE BK WOI
 METHYL-PELLETIERINE BK WOI
 MUCILAGE 6,000-340,000 RIND HHB
 WOI
 NEOCHLOROGENIC-ACID FR RAA
 NIACIN 3-50 FR CRC USA
 OLEIC-ACID SD HHB
 OXALIC-ACID 140 FR USA
 PALMITIC-ACID SD HHB
 PANTOTHENIC-ACID 6-31 FR USA
 PECTIN 20,000-40,000 PC RAA
 PECTIN 2,700 FR WOI
 PELARGONIDIN-3,5-DIGLUCOSIDE FL
 WOI
 PELARGONIDIN-3-GLUCOSIDE SD RAA
 PELLETIERINE BK WOI
 1,2,3,4,6-PENTA-O-GALLOYL-BETA-D-
 GLUCOSE LF RAA
 PHOSPHATIDYLCHOLINE SD RAA
 PHOSPHATIDYLINOSITOL SD RAA
 PHOSPHATIDYLSERINE SD RAA
 PHOSPHORUS 80-3,182 FR CRC USA
 WOI
 PHYTOSTEROLS 170-892 FR USA
 POLYPHENOLS 2,200-10,500 FR RAA
 POTASSIUM 1,330-18,950 FR CRC USA
 WOI
 2-(2-PROPENYL)-DELTA'-PIPERIDEINE
 LF WOI
 PROTEIN 7,700-73,000 FR CRC USA
 PROTEIN 25,000 SD CRC
 PROTOCATECHUIC-ACID FR RAA
 PSEUDOPPELLETIERINE BK WOI
 PUNICACORTEINS BK RAA
 PUNICAFOLIN PL JSG
 PUNICALAGIN PC CCO
 PUNICALIN PC CCO
 PUNICIC-ACID 35,000-140,000 SD WOI
 PUNIGLUCONIN BK RAA
 RESINS 45,000 PC RAA WOI
 RIBOFLAVIN 0-4 FR CRC USA
 BETA-SITOSTEROL BK HHB
 SODIUM 9-350 FR CRC USA WOI
 SORBITOL HHB
 STARCH 0 SD HHB
 STEARIC-ACID SD HHB
 STRICTININ LF RAA
 STYPTIC-ACID FL RAA
 SULFUR 120 FR WOI

TANNIN 1,700 FR JU WOI
 TANNIN 104,000-336,000 PC RAA WOI
 TANNIN 100,000-250,000 ST BK WOI
 TANNIN 280,000 RT BK WOI
 TANNIN 110,000 LF WOI
 1,2,4,6-TETRA-O-GALLOYL-BETA-D-
 GLUCOSE LF RAA
 THIAMIN 0-4 FR CRC USA
 CIS-9,TRANS-11,CIS-13-TRIENE-ACID
 SD HHB
 URSOLIC-ACID LF FR WOI
 VIT-B-6 1-5 FR USA
 WATER 350,000 SD WOI
 WATER 780,000-823,220 FR USA WOI
 WAX 8,000 PC WOI

PYCNANTHEMUM ALBESCENS
 TORR. & GRAY

“WHITE MOUNTAIN MINT”

8-ACETOXYCARVOTANACETONE 24-
 81 SH BML
 BETA-BOURBONENE 16-54 SH BML
 CIS-CARVEOL 496-1,674 SH BML
 TRANS-CARVEOL 1,112-3,753 SH BML
 CARVONE 128-14,310 SH BML
 1,8-CINEOLE 80-270 SH BML
 CIS-DIHYDROCARVONE 8-27 SH BML
 TRANS-DIHYDROCARVONE 88-297 SH
 BML
 BETA-COPAENE SH BML
 ISOMENTHONE 80-270 SH BML
 LEDENE 8-27 SH BML
 LIMONENE 1,688-5,697 SH BML
 LINALOOL 32-108 SH BML
 MENTHONE 680-2,295 SH BML
 ALPHA-PINENE 16-54 SH BML
 PULEGONE 24-14,283 SH BML
 SABINENE 160-540 SH BML
 ALPHA-TERPINEOL 48-162 SH BML
 ALPHA-TERPINEYL-ACETATE 2,264-
 7,641 SH SML

BML cited LF & FL, not Shoots, but I
 assigned them to SH

PYCNANTHEMUM BEADLEI
 (SMALL) FERNALD

“BEADLE’S MOUNTAIN MINT”

BORNEOL 42 SH BML
 CAMPHENE 7 SH BML
 CARYOPHYLLENE 49 SH BML
 1,8-CINEOLE 28 SH BML

P-CYMENE 21 SH BML
 EO 7,000 SH BML
 GERMACRENE-D 21 SH BML
 ALPHA-HUMULENE 49 SH BML
 ISOMENTHONE 35 SH BML
 CIS-ISOPULEGONE 28 SH BML
 TRANS-ISOPULEGONE 35 SH BML
 LIMONENE 329 SH BML
 MENTHOL 140 SH BML
 MENTHONE 644 SH BML
 MYRCENE 28 SH BML
 2-OCTEN-3-OL 133 SH BML
 ALPHA-PINENE 21 SH BML
 BETA-PINENE 14 SH BML
 PIPERITONE 168 SH BML
 PIPERITENONE 1,533 SH BML
 PULEGONE 3,577 SH BML
 SABINENE 7 SH BML

BML said LF & FL but I have treated as SH

PYCNANTHEMUM
CALIFORNICUM TORR.

“CALIFORNIA MOUNTAIN MINT”

CARYOPHYLLENE 144 SH BML
 1,8-CINEOLE 576 SH BML
 P-CYMENE TR SH BML
 EO 36,000 SH BML
 ALPHA-HUMULENE 468 SH BML
 ISOMENTHONE 3708 SH BML
 CIS-ISOPULEGONE 216 SH BML
 TRANS-ISOPULEGONE 108 SH BML
 LIMONENE 144 SH BML
 MENTHONE TR SH BML
 MYRCENE 108 SH BML
 1-OCTEN-3-OL 252 SH BML
 1-OCTEN-3-YL-ACETATE 144 SH BML
 ALPHA-PINENE 144 SH BML
 BETA-PINENE 108 SH BML
 PIPERITENONE 108 SH BML
 PULEGONE 28,836 SH BML
 SABINENE 180 SH BML
 ALPHA-TERPINEOL TR SH BML

BML said LF & FL but I have treated as SH

PYCNANTHEMUM
CLINOPODIOIDES TORR. &
 GRAY

“CLINOPOD MOUNTAIN MINT”

TRANS-ANETHOLE TR SH BML
 CAMPHOR 42-44 SH BML

CARVONE 42-44 SH BML
 CARYOPHYLLENE 42-704 SH BML
 1,8-CINEOLE 21-88 SH BML
 P-CYMENE 63-66 SH BML
 EO 21,000-22,000 SH BML
 EPIBICYCLOSQUIPHELLANDRENE
 273-286 SH BML
 GERMACRENE-D 42-374 SH BML
 ISOMENTHONE 21-528 SH BML
 ISOPIPERITENONE 63-66 SH BML
 CIS-ISOPULEGONE 63-66 SH BML
 TRANS-ISOPULEGONE 63-66 SH
 BML
 LIMONENE 1,134-10,780 SH BML
 LINALOOL 84-88
 MENTHOL 168-176 SH BML
 MENTHONE 126-12,826 SH BML
 METHYL-EUGENOL 84-88 SH BML
 MYRCENE 84-352 SH BML
 3-OCTANOL 126-132 SH BML
 3-OCTANONE 84-88 SH BML
 1-OCTEN-3-OL 105-242 SH BML
 ALPHA-PINENE 84-88 SH BML
 BETA-PINENE 63-66 SH BML
 PIPERITENONE 21-3,586 SH BML
 PIPERITONE 42-3,586 SH BML
 PULEGONE 105-5,984 SH BML
 SABINENE 21-242 SH BML
 ALPHA-TERPINEOL 42-44 SH BML
 TERPINEN-4-OL 294-308 SH BML

BML said LF & FL but I have treated as SH

PYCNANTHEMUM CURVIPES
 (GREENE) GRANT & EPLING

“CURVED MOUNTAIN MINT”

CAMPHENE TR SH BML
 CIS-CARVEOL TR SH BML
 CARVONE 42 SH BML
 TRANS-DIHYDROCARVONE 1,680
 SH BML
 CIS-DIHYDROCARVONE 16,443
 SH BML
 ISO-DIHYDROCARVEOL 231 SH BML
 EO 21,000 SH BML
 LIMONENE 2,323 SH BML
 MYRCENE 63 SH BML
 ALPHA-PHELLANDRENE TR SH BML
 ALPHA-PINENE 84 SH BML
 BETA-PINENE 42 SH BML
 SABINENE 21 SH BML

BML said LF & FL but I have treated as SH

PYCNANTHEMUM FLEXUOSUM
 (WALT.) BSP

“FLEXUOSE MOUNTAIN MINT”

EO 12,000 SH BML
 GERMACRENE-D 264 SH BML
 LINALOOL 10,680 SH BML
 LINALYL-ACETATE 612 SH BML

BML said LF & FL but I have treated as SH

PYCNANTHEMUM INCANUM (L.)
 MICHX.

“HOARY MOUNTAIN MINT”

BICYCLOGERMACRENE TR SH BML
 BORNEOL 33-57 SH BML
 CARYOPHYLLENE TR SH BML
 1,8-CINEOLE 33-76 SH BML
 P-CYMENE 22-38 SH BML
 EO 11,000-19,000 SH BML
 BETA-ELEMENE 22-190 SH BML
 GERMACRENE-D TR SH BML
 ISOMENTHONE 352-931 SH BML
 CIS-ISOPULEGONE 110-190 SH BML
 TRANS-ISOPULEGONE 88-152 SH BML
 LIMONENE 209-1,216 SH BML
 LINALOOL 11-38 SH BML
 MENTHOL 22-798 SH BML
 MENTHONE 3,036-10,127 SH BML
 MYRCENE 44-114 SH BML
 NEOMENTHOL 22-95 SH BML
 3-OCTANOL 22-95 SH BML
 1-OCTEN-3-OL 22-95 SH BML
 ALPHA-PINENE 84-88 SH BML
 3-OCTYL-ACETATE TR SH BML
 3-OCTYL-3-YL-ACETATE TR SH BML
 ALPHA-PINENE 55-114 SH BML
 BETA-PINENE 44-95 SH BML
 PIPERITENONE 11-19 SH BML
 PIPERITONE TR SH BML
 PULEGONE 3366-10,336 SH BML
 SABINENE 11-38 SH BML
 ALPHA-TERPINEOL TR SH BML

BML said LF & FL but I have treated as SH

PYCNANTHEMUM LOOMISII
 NUTT.

“LOOMIS' MOUNTAIN MINT”

BORNYL-ACETATE 33-42 SH BML
 CAMPHENE 330-1,260 SH BML

CARVONE 1-42 SH BML
 CARYOPHYLLENE 330-672 SH BML
 CARYOPHYLLENE-OXIDE TR SH BML
 1,8-CINEOLE 17,853-26,040 SH BML
 P-CYME NE 33-84 SH BML
 DELTA-ELEMENE 33-42 SH BML
 ELEMOL TR SH BML
 EO 31,000-42,000 SH BML
 GERMACRENE-D 66-84 SH BML
 LIMONENE 330-2,520 SH BML
 LINALOOL 33-84 SH BML
 CIS-P-MENTH-2-EN-1-OL 33-42 SH
 BML
 MYRCENE 495-756 SH BML
 TRANS-NEROLIDOL TR SH BML
 ALPHA-PINENE 2,046-2,646 SH BML
 BETA-PINENE 825-1,218 SH BML
 PULEGONE 33-84 SH BML
 SABINENE 4,884-7,224 SH BML
 TRANS-SABINENE-HYDRATE 66-168 SH
 BML
 ALPHA-TERPINENE 33-168 SH BML
 GAMMA-TERPINENE 99-420 SH BML
 ALPHA-TERPINEOL 1,452-1,932 SH
 BML
 DELTA-TERPINEOL 33-84 SH BML
 TERPINEN-4-OL 396-714 SH BML
 TERPINOLENE 33-84 SH BML

BML said LF & FL but I have treated as SH

PYCNANTHEMUM MONTANUM MICHX.

“MONTANE MOUNTAIN MINT”

TRANS-ALPHA-BERGAMOTENE 14-16
 SH BML
 BORNEOL 21-24 SH BML
 BETA-BOURBONENE 91-104 SH BML
 BICYCLOGERMARENE 63-72 SH
 BML
 CAMPHENE 833-952 SH BML
 CAMPHOR 3,395-3,880 SH BML
 CARYOPHYLLENE 42-56 SH BML
 1,8-CINEOLE 21-720 SH BML
 EO 7,000-8,000 SH BML
 GERMARENE-D 21-32 SH BML
 ISOMENTHON 42-4,848 SH BML
 ISOPIPERITENONE 14-16 SH BML
 TRANS-ISOPULEGONE 7-8 SH BML
 LIMONENE 287-416 SH BML
 LINALOOL 105-120 SH BML
 MENTHOL 28-32 SH BML

MENTHON 371-640 SH BML
 MYRCENE 7-16 SH BML
 NEOMENTHOL 14-16 SH BML
 3-OCTANOL 35-50 SH BML
 1-OCTEN-3-OL 7-152 SH BML
 1-OCTEN-3-YL-ACETATE 7-8 SH BML
 ALPHA-PINENE 7-272 SH BML
 BETA-PINENE 7-56 SH BML
 PIPERITONE 196-224 SH BML
 PIPERITONENE 21-24 SH BML
 PULEGONE 518-840 SH BML
 SABINENE 147-168 SH BML
 TERPINEN-4-OL 14-16 SH BML
 ALPHA-THUJENE 28-32 SH BML

BML said LF & FL but I have treated as SH

PYCNANTHEMUM MUTICUM (MICHX.) PERS.

“MUTICUS MOUNTAIN MINT”

TRANS-ALPHA-BERGAMOTENE 29-200
 SH BML
 BORNEOL 58-1,350 SH BML
 CAMPHENE 1-50 SH BML
 CARYOPHYLLENE 29-300 SH BML
 1,8-CINEOLE 1-50 SH BML
 P-CYME NE SH BML
 EO 29,000-50,000 SH BML
 GERMARENE-D 1-350 SH BML
 ISOMENTHON 29-2,100 SH BML
 CIS-ISOPULEGONE 29-750 SH BML
 TRANS-ISOPULEGONE 116-200 SH
 BML
 LIMONENE 87-900 SH BML
 MENTHOL 87-450 SH BML
 D-MENTHOL 4,350-7,500 SH BML
 MENTHON 2,320-11,300 SH BML
 D-MENTHON 2,320-4,000 SH BML
 MYRCENE 29-200 SH BML
 NEOISOMENTHOL 1-50 SH BML
 NEOMENTHOL 29-100 SH BML
 CIS-OCIMENE 1-50 SH BML
 1-OCTEN-3-OL 29-900 SH BML
 ALPHA-PINENE 29-200 SH BML
 BETA-PINENE 29-150 SH BML
 PIPERITONE 1-200 SH BML
 PIPERITONENE 27-950 SH BML
 TRANS-PIPERITOL 1-100 SH BML
 PULEGONE 17,980-40,250 SH BML
 SABINENE 1-50 SH BML

BML said LF & FL but I have treated as SH

PYCNANTHEMUM NUDUM

NUTT.

"NUDE MOUNTAIN MINT"

CARVACROL 325-910 SH BML

EO 25,000-26,000 SH BML

THYMOL 18,525-23,348 SH BML

BML cited these as LF & FL; I lumped them
as SH

PYCNANTHEMUM PILOSUM

NUTT.

"PILOSE MOUNTAIN MINT"

TRANS-ANETHOLE LF FL BML

ANISALDEHYDE LF FL BML

TRANS-ALPHA-BERGAMOTENE 19-70
LF FL BMLBICYCLOGERMACRENE 19-70 LF FL
BML

BETA-BOURBONENE 10-35 LF FL BML

CARYOPHYLLENE 1-350 LF FL BML

1,8-CINEOLE 10-35 LF FL BML

BETA-ELEMENE 28-105 LF FL BML

EO 39,000-58,000 LF FL BML

GERMACRENE-D 28-245 LF FL BML

ISOMENTHONE 494-2,940 LF FL BML

ISOPIPERITENONE TR LF FL BML

TRANS-ISOPULEGONE 28-105 LF FL
BML

LIMONENE 66-1,225 LF FL BML

LINALOOL 1-210 LF FL BML

MENTHOL 142-700 LF FL BML

MENTHONE 950-15,400 LF FL BML

MYRCENE 10-105 LF FL BML

NEOMENTHOL 1,482-5,460 LF FL
BML

3-OCTANOL TR LF FL BML

1-OCTEN-3-OL 10-35 LF FL BML

ALPHA-PINENE 38-140 LF FL BML

BETA-PINENE 38-140 LF FL BML

PIPERITENONE 19-105 LF FL BML

PULEGONE 2,574-28,000 LF FL BML

SABINENE 10-70 LF FL BML

SPATHULENOL TR LF FL BML

ALPHA-TERPINEOL 28-105 LF FL
BML

TERPINEN-4-OL 48-175 LF FL BML

BML said LF & FL for the low values, FL
for the higher values.

*PYCNANTHEMUM**PYCNANTHEMOIDES*

(LEAVENW.) FERNALD

"TYPICAL MOUNTAIN MINT"

TRANS-ANETHOLE TR SH BML

BORNEOL 78-116 SH BML

CAMPHOR 78-116 SH BML

CARYOPHYLLENE 1-1,102 SH BML

1,8-CINEOLE 39-116 SH BML

P-CYMELE 39-58 SH BML

EO 39,000-58,000 SH BML

GERANIOL 1,911-2,842 SH BML

GERANYL-ACETATE 1,053-1,566 SH
BML

GERMACRENE-D 39-464 SH BML

ISOMENTHONE 390-580 SH BML

CIS-ISOPULEGONE 195-290 SH BML

TRANS-ISOPULEGONE 234-348 SH BML

LIMONENE 234-5,800 SH BML

LINALOOL 26,598-39,556 SH BML

MENTHONE 234-20,242 SH BML

METHYL-EUGENOL TR SH BML

MYRCENE 273-406 SH BML

1-OCTEN-3-OL 195-580 SH BML

ALPHA-PINENE 156-696 SH BML

BETA-PINENE 117-290 SH BML

PIPERITENONE 312-464 SH BML

PULEGONE 23,088-34,336 SH BML

SABINENE 39-1,856 SH BML

ALPHA-TERPINEOL 1-696 SH BML

BML said LF & FL but I have treated as SH

PYCNANTHEMUM SETOSUM

NUTT.

"SETOSE MOUNTAIN MINT"

BORNEOL 160-248 SH BML

CAMPHELE 20-31 SH BML

CARVONE 120-186 SH BML

CARYOPHYLLENE 1,060-1,643 SH BML

1,8-CINEOLE 20-7,099 SH BML

CIS-DIHYDROCARVONE 3,954-6,129 SH
BMLTRANS-DIHYDROCARVONE 1,040-1,612
SH BML

EO 20,000-31,000 SH BML

EUGENOL 60-93 SH BML

GERMACRENE-D TR SH BML

ISODIHYDROCARVEOL 3,660-5,693 SH
BML

ISOMENTHONE 180-279 SH BML
 ISOPIPERITONE 20-31 SH BML
 TRANS-ISOPULEGONE 40-62 SH BML
 LIMONENE 40-1,085 SH BML
 LINALOOL 80-124 SH BML
 MENTHOL TR SH BML
 MENTHONE 4,800-7,440 SH BML
 MYRCENE 40-341 SH BML
 NEOISODIHYDROCARVEOL 520-806 SH
 BML
 NEOISODIHYDROCARVYL-ACETATE
 1,080-1,674 SH BML
 NEOMENTHOL 20-31 SH BML
 3-OCTANOL 60-93 SH BML
 1-OCTEN-3-OL 180-279 SH BML
 ALPHA-PINENE 20-1,209 SH BML
 BETA-PINENE 40-527 SH BML
 PIPERITENONE 40-62 SH BML
 PULEGONE 12,740-19,747 SH BML
 SABINENE 300-465 SH BML
 TERPINEN-4-OL 220-341 SH BML

BML said LF & FL but I have treated as SH

PYCNANTHEMUM

TENUIFOLIUM SCHRAD.

"SLENDERLEAF MOUNTAIN MINT"

ALLOAROMADENDRENE 28-440 SH
 BML
 BORNEOL 6-220 SH BML
 BORNYL-ACETATE 14-880 SH BML
 BETA-BOURBONENE 16-400 SH BML
 DELTA-CADINENE 1-620 SH BML
 10-(ALPHA)-CADINOL 6-60 SH BML
 CAMPHENE 2-420 SH BML
 CAMPHOR 4-40 SH BML
 CARVEOL 80-800 SH BML
 CARVONE 460-1,320 SH BML
 CARYOPHYLLENE 28-2,460 SH BML
 CARYOPHYLLENE-OXIDE 2-320 SH
 BML
 1,8-CINEOLE 1-1,100 SH BML
 P-CYMELENE 1-140 SH BML
 BETA-ELEMENE 16-1,600 SH BML
 EO 2,000-20,000 SH BML
 GERMACRENE-D 114-9,840 SH BML
 3-HEXENOL 266-2,660 SH BML
 ALPHA-HUMULENE 8-640 SH BML
 ISOMENTHONE 1-10,580 SH BML
 ISOPULEGONE TR SH BML
 CIS-ISOPULEGONE 14-140 SH BML
 TRANS-ISOPULEGONE 4-40 SH BML

LIMONENE 2-8,520 SH BML
 LINALOOL 46-700 SH BML
 MENTHOL 62-620 SH BML
 MENTHONE 2-3,660 SH BML
 MENTHYL-ACETATE 4-40 SH BML
 TRANS-METHYL-MYRCENATE
 1,086-10,860 SH BML
 MYRCENE 16-2,560 SH BML
 TRANS-OCIMENE 30-300 SH BML
 3-OCTANOL 2-20 SH BML
 1-OCTEN-3-OL 1-80 SH BML
 1-OCTYL-3-YL-ACETATE 2-120 SH
 BML
 PALUSTROL 4-180 SH BML
 ALPHA-PHELLANDRENE 2-420 SH
 BML
 ALPHA-PINENE 1-1,020 SH BML
 BETA-PINENE 1-100 SH BML
 PULEGONE 4-13,440 SH BML
 SABINENE 1-360 SH BML
 TERPINEN-4-OL 2-40 SH BML
 GAMMA-TERPINENE 1-260 SH BML
 ALPHA-TERPINEOL 28-280 SH BML
 TERPINOLENE 1-20 SH BML
 THUJONE 19-190 SH BML

BML said LF & FL but I have treated as SH

PYCNANTHEMUM TORREYI

BENTH.

"TORREY'S MOUNTAIN MINT"

CAMPHENE 10 SH BML
 CARYOPHYLLENE 140 SH BML
 1,8-CINEOLE 10 SH BML
 P-CYMELENE 30 SH BML
 EO 10,000 SH BML
 GERMACRENE-D 90 SH BML
 ISOMENTHONE 310 SH BML
 CIS-ISOPULEGONE 20 SH BML
 TRANS-ISOPULEGONE 70 SH BML
 LIMONENE 60 SH BML
 LINALOOL 10 SH BML
 MENTHONE 8,100 SH BML
 MYRCENE 90 SH BML
 1-OCTEN-3-OL 70 SH BML
 ALPHA-PINENE 20 SH BML
 BETA-PINENE 20 SH BML
 PIPERITENONE 40-62 SH BML
 PIPERITONE 30 SH BML
 PULEGONE 820 SH BML
 SABINENE 10 SH BML

BML said LF & FL but I have treated as SH

*PYCNANTHEMUM**VERTICILLATUM* (MICHX.)

PERS.

"WHORLED MOUNTAIN MINT"

CARYOPHYLLENE 315 SH BML

1,8-CINEOLE 42 SH BML

P-CYMELE 42 SH BML

EO 21,000 SH BML

GERMACRENE-D 63 SH BML

ISOMENTHONE 147 SH BML

LIMONENE 336 SH BML

MENTHONE 4,557 SH BML

MYRCENE 126 SH BML

1-OCTEN-3-OL 63 SH BML

ALPHA-PINENE 63 SH BML

BETA-PINENE 63 SH BML

PIPERITENONE TR SH BML

PULEGONE 14,595 SH BML

SABINENE 21 SH BML

BML said LF & FL but I have treated as SH

PYCNANTHEMUM VIRGINIANUM

(L.) DURAND & JACKSON

"VIRGINIA MOUNTAIN MINT"

ALLO-AROMADENDRENE 24-116 SH
BML

BORNYL-ACETATE 90-435 SH BML

BETA-BOURBONENE 6-232 SH BML

10-(ALPHA)-CADINOL 18-87 SH BML

CAMPHENE 6-87 SH BML

CARVACROL SH BML

CARYOPHYLLENE 72-1,015 SH BML

1,8-CINEOLE 6-58 SH BML

P-CYMELE 6-290 SH BML

BETA-ELEMENE 240-1,160 SH BML

EO 6,000-29,000 SH BML

GERANIOL SH BML

GERMACRENE-D 18-6,032 SH BML

ISOMENTHONE 102-22,533 SH BML

LIMONENE 12-14,674 SH BML

MENTHOL 18-3,016 SH BML

MENTHONE 25-14,819 SH BML

MYRCENE 6-261 SH BML

NEOMENTHOL 48-232 SH BML

1-OCTEN-3-OL 18-609 SH BML

1-OCTEN-3-YL-ACETATE 6-203 SH BML

ALPHA-PINENE 6-145 SH BML

BETA-PINENE 6-145 SH BML

PIPERITENONE 6-203 SH BML

PIPERITONE 6-203 SH BML

PULEGONE 102-19,024 SH BML

SABINENE 1-6 SH BML

ALPHA-TERPINEOL 18-493 SH BML

CIS-BETA-TERPINEOL 30-145 SH BML

THYMOL 66-377 SH BML

BML said LF & FL but I have treated as SH

PYRUS COMMUNIS L.

"PEAR"

ABSCISSIC-ACID SD CCO

ACETIC-ACID PL HHB

ACETIC-ACID-ISOBUTYL-ESTER PL
HHB

ACETONE PL HHB

ACETYLARBUTIN PL HHB

6-O-ACETYLARBUTIN PL JSG

ALANINE 130-803 FR USA

ALUMINUM <1-105 FR AAS USG

AMYGDALIN SD HHB

ARBUTIN PL HHB

ARGININE 70-432 FR USA

ARSENIC 0.00075-0.06 FR AAS USG

ASCORBIC-ACID 40-250 FR USA

ASH 2,720-40,000 FR AAS USA USG

ASPARTIC-ACID 770-4,756 FR USA

BARIUM 0.045-11 FR USG

BORON 1-82 FR AAS BOB USG

BROMINE <1 FR AAS

CADMIUM 0.0003-0.125 FR AAS USG

CAFFEIC-ACID 43-19,700 FR CRC(FSN)

TRANS-CAFFEOLYLARBUTIN PL HHB

TRANS-CAFFEOLYLCALLERYANIN PL
HHB

CALCIUM 68-1,776 FR AAS USG

CARBOHYDRATES 151,000-933,292 FR
USA

BETA-CAROTENE 0.17-1.7 FR JAF37:657

CATECHIN PL HHB

CIS-CHLOROGENIC-ACID PL HHB

TRANS-CHLOROGENIC-ACID PL HHB

CHROMIUM 0.002-0.555 FR AAS USG

CITRIC-ACID FR HHB

COBALT 0.015-0.111 FR USG

COPPER 0.45-11.1 FR USG

CIS-P-COUMAROYLQUINIC-ACID PL
HHBTRANS-P-COUMAROYLQUINIC-ACID
PL HHB

CYANIDIN-3-GALACTOSIDE EP HHB

CYSTINE 40-247 FR USA

- CIS-4-DECADIENIC-ACID-ETHYL-ESTER PL HHB
 CIS-4-DECADIENIC-ACID-METHYL-ESTER PL HHB
 TRANS-2-DECADIENIC-ACID-ETHYL-ESTER PL HHB
 TRANS-2-DECADIENIC-ACID-METHYL-ESTER PL HHB
 TRANS-2,TRANS-4-DECADIENIC-ACID-ETHYL-ESTER PL HHB
 TRANS-2,TRANS-4-DECADIENIC-ACID-METHYL-ESTER PL HHB
 4'-DIHYDROPHASEIC-ACID SD CCO
 EPICATECHIN PL HHB
 EPIFRIEDELIN FR HHB
 FAT 2,790-32,198 FR USA
 FIBER 14,000-86,473 FR USA
 FLUORINE <0.1 FR AAS
 FOLACIN 0.06-0.5 FR USA
 FORMALDEHYDE PL HHB
 FRIEDELIN FR HHB
 GADOLEIC-ACID 10-62 FR USA
 GIBBERELLIN-A-25 SD CCO
 GIBBERELLIN-A-45 SD CCO
 GLUTAMIC-ACID 280-1,729 FR USA
 GLYCINE 110-679 FR USA
 HEXANAL PL HHB
 HISTIDINE 40-247 FR USA
 HYDROQUINONE PL HHB
 4-HYDROXYMETHYLPROLINE FR HHB
 IRON 0.9-37 FR AAS USG
 ISOAMYLALCOHOL PL HHB
 CIS-ISOCHLOROGENIC-ACID PL HHB
 TRANS-ISOCHLOROGENIC-ACID PL HHB
 ISOLEUCINE 110-679 FR USA
 ISORHAMNETIN-3-GLUCOSIDE PL HHB
 ISORHAMNETIN-3-RHAMNOSYLGALACTOSIDE PL HHB
 ISORHAMNETIN-3-RHAMNOSYLGLUCOSIDE PL HHB
 KAEMPFEROL-3-ARABINOSIDE PL HHB
 KAEMPFEROL-3-GALACTOSIDE PL HHB
 KAEMPFEROL-3-GLUCOSIDE PL HHB
 KAEMPFEROL-3-RUTINOSIDE PL HHB
 LEAD 0.02-1.11 FR AAS USG
 LEUCINE 200-1,235 FR USA
 LINOLEIC-ACID 930-5,744 FR USA
 ALPHA-LINOLENIC-ACID 10-62 FR USA
 LITHIUM 0.06-0.185 FR USG
 LUTEIN 1-11 FR JAF37:657
 LYSINE 140-865 FR USA
 MAGNESIUM 54-1,110 FR AAS USG USA
 MALIC-ACID FR HHB
 MANGANESE 0.3-5.55 FR USG
 MERCURY 0.00015-0.019 FR AAS USG
 METHIONINE 50-309 FR USA
 METHYLETHYLKETONE PL HHB
 METHYL-N-PROPYLKETONE PL HHB
 MOLYBDENUM <0.1-0.26 FR AAS USG
 MUFA 840-5,188 FR USA
 TRANS-NEOCHLOROGENIC-ACID PL HHB
 NIACIN 1-6 FR USA
 NICKEL 0.1-1.11 FR AAS USG
 NITROGEN 480-3,000 FR AAS
 OLEIC-ACID 810-5,003 FR USA
 PALMITIC-ACID 170-1,050 FR USA
 PALMITOLEIC-ACID 20-124 FR USA
 PANTOTHENIC-ACID 0.7-4 FR USA
 PECTIN 40,000 FR HHB
 BETA-PHENYLETHYLAMINE FR HHB
 PHLORORRHIZIN PL HHB
 PHOSPHORUS 90-1,332 FR USG
 PHYTOSTEROLS 80-494 FR USA
 POTASSIUM 1,200-11,250 FR AAS USA USG
 PROLINE 110-679 FR USA
 PROPIONALDEHYDE PL HHB
 PROTEIN 3,690-25,400 FR USA
 PUFA 940-5,806 FR USA
 ALPHA-PYRUFURAN PL JSG
 BETA-PYRUFURAN PL JSG
 QUERCETIN 28 PC PAM
 QUERCETIN-3-ARABINOSIDE PL HHB
 QUERCETIN-3-GALACTOSIDE PL HHB
 QUERCETIN-3-GLUCOSIDE PL HHB
 QUERCETIN-3-RUTINOSIDE PL HHB
 QUINIC-ACID FR HHB
 RIBOFLAVIN 0.4-2.4 FR USA
 RUBIDIUM 1.6-20 FR AAS
 SELENIUM 0.000075-0.00074 FR USG
 SERINE 140-865 FR USA
 SFA 220-1,359 FR USA
 SHIKIMIC-ACID TR FR HHB
 SILICON 2-20 FR AAS
 SILVER 0.015-0.037 FR USA
 SODIUM 0-407 FR USG
 STRONTIUM 0.45-18.5 FR USG
 SULFUR 3-300 FR AAS USG
 THIAMIN 0.2-1.2 FR USA
 THREONINE 100-618 FR USA
 TITANIUM 0.075-7.4 FR USG
 ALPHA-TOCOPHEROL 0.6-31 FR TOT USA

TYROSINE 30-185 FR USA
 URSOLIC-ACID FR HHB
 VALINE 140-865 FR USA
 VANADIUM 0.225-0.555 FR USG
 VIT-B6 0.1-1.1 FR USA
 WATER 817,000-891,000 FR USG
 ZINC 0.15-26.6 FR USG
 ZIRCONIUM 0.3-1.11 FR USG

AAS=ACTA AGRIC SCAND SUPPL 22:
 1980; H2O=84%; ZMB=6.25 X APB

QUASSIA AMARA L.

“QUASSIA; BITTERWOOD”

ALKALOIDS 2,500 WD HHB
 CALCIUM-TARTRATE RT WOI
 EO RT WOI
 GALLIC-ACID RT WOI
 18-HYDROXYQUASSIN WD HHB
 ISOQUASSIN WD HHB
 MALIC-ACID RT WOI
 NEOQUASSIN WD HHB
 POTASSIUM-ACETATE WD WOI
 QUASSIN 1,000-2,000 WD HHB
 QUASSINOL WD HHB
 QUASSOL WD HHB
 BETA-SITOSTENONE WD HHB
 BETA-SITOSTEROL WD WOI

QUERCUS ALBA L.

“WHITE OAK”

ALUMINUM 21 BK PED
 ALUMINUM 20-1,064 ST USG
 ASCORBIC-ACID 127 BK PED
 ASH 136,000 BK PED
 ASH 20,000-76,000 ST USG
 BARIUM 18-1,140 ST USG
 BORON 2-38 ST USG
 CADMIUM 0-1 ST USG
 CALCIUM 37,000 BK PED
 CALCIUM 4,600-27,360 ST USG
 CARBOHYDRATES 775,000 BK PED
 CARBOHYDRATES 596,200 FLOUR SD
 CEB 2/
 BETA-CAROTENE TR BK PED
 CATECHIN BK HHB
 CHROMIUM 3 BK PED
 CHROMIUM 0.06-5.32 ST USG
 COBALT 9.2 BK PED
 COBALT 0-5.32 ST USG
 COPPER 1.2-15.2 ST USG

ELLAGITANNIN BK WICHTL
 EO 100-500 BK PED
 FAT 4,000 BK PED
 FAT 253,100 FLOUR CEB 2/
 FAT 78,000 SD CRC
 FIBER 92,000 BK PED
 FLUORINE 0-0.076 ST USG
 3-FRIEDELANONE BK HHB
 FRIEDELIN BK HHB
 FRIEDELINOL BK HHB
 GALLIC-ACID BK PED
 GALLOCATECH
 IN BK HHB
 GLUTIN-5(6)-EN-3-BETA-OL BK HHB
 GLUTIN-5(6)-EN-3-ON BK HHB
 2-HYDROXYDAMMAR-24-EN-3-ON BK
 HHB
 IODINE 2-6 ST USG
 IRON 27 BK PED
 IRON 2-380 ST USG
 KILOCALORIES 2,480 BK PED
 LANTHANUM 2.6-23.6 ST USG
 LEAD 0.2-76 ST USG
 LEUCOCYANIDIN BK HHB
 LEUCODELPHINIDIN BK HHB
 LITHIUM 0.092-4.94 ST USG
 MAGNESIUM 160 BK PED
 MAGNESIUM 100-5,320 ST USG
 MANGANESE 253 BK PED
 MANGANESE 20-3,800 ST USG
 MESOINOSITOL BK HHB
 MOLYBDENUM 0-9.12 ST USG
 NIACIN TR BK PED
 NICKEL 0.1-5.3 ST USG
 PECTIN BK HHB
 PHLOBATANNIN BK HHB
 PHOSPHORUS 64 BK PED
 PHOSPHORUS 120-2,432 ST USG
 POTASSIUM 1,900 BK PED
 POTASSIUM 600-7,296 ST USG
 PROTEIN 85,000 BK PED
 PROTEIN 54,400 FLOUR SD CEB 2/
 PROTEIN 62,000 SD CRC
 QUERCETIN BK HHB
 QUERCIN BK HHB
 QUERCITRIN BK PED
 L-(+)-QUERCITOL BK HHB
 RESIN BK HHB
 RIBOFLAVIN 0 BK PED
 RUBIDIUM 3.7-40 ST USG 3/
 SCYLLITOL BK HHB
 SELENIUM 15 BK PED
 SELENIUM 0-0.04 ST USG
 SILICON 16 BK PED

SILVER 0-0.228 ST USG
 BETA-SITOSTEROL BK HHB
 SODIUM 54 BK PED
 SODIUM 4-380 ST USG
 STRONTIUM 10-532
 TANNIN 78,500-200,000 BK CEB 2/
 HHB 1/
 THIAMIN 0 BK PED
 TIN 2.2 BK PED
 TITANIUM 0.2-76 ST USG
 VANADIUM 0.1-1.52 ST USG
 L-VIBURNITOL BK HHB
 WATER 772,000 BK PED
 YTTRIUM 0.2-4.1 ST USG
 ZINC 24 BK PED
 ZINC 2-182 ST USG

1/Early notes on the American white oak were transcribed directly from the HHB notes on oak bark in Europe. HHB notes herein are not known to be true for *Q. alba*, but supplied in absence of other data. 2/ CEB= Charlotte Erichsen-Brown's Use of Plants for The Past 500 Years. 3/ assumes stem= 10% ash

QUERCUS INFECTORIA OLIV.

"ALEPPO OAK"
 "DYER'S OAK"
 "GALL OAK"

CYCLOGALLIPHARIC-ACID PL CCO
 M-DIGALLIC-ACID PL HHB
 ELLAGIC-ACID PL CCO
 GALLIC-ACID 20,000-40,000 "FR" CCO
 GALLOTANNIC-ACID PL CCO
 GLUCOGALLIC-ACID PL HHB
 BETA-D-GLUCOGALLIN PL HHB
 HEXA-HEPTA-GALLOYL-GLUCOSE PL
 HHB
 PENTADIGALLOYLGLUCOSE PL
 411/
 QUERCETIN LF HHB
 TANNIC-ACID PL HHB
 TANNIN PL HHB

QUERCUS PHELLOS L.

"WILLOW OAK"

ALUMINUM 14-420 ST USG
 ASH 14,000-42,000 ST USG
 BARIUM 14-210 ST USG

BORON 1-21 ST USG
 CADMIUM 0-3 ST USG
 CALCIUM 2,940-14,700 ST USG
 CHROMIUM 0-0.084 ST USG
 COBALT 0-0.5 ST USG
 COPPER 1-29 ST USG
 FLUORINE 0-0.084 ST USG
 IODINE 4-6 ST USG
 IRON 14-294 ST USG
 LEAD 0.4-21 ST USG
 MAGNESIUM 210-2,940 ST USG
 NICKEL 0.4-12.6 ST USG
 PHOSPHORUS 168-1,512 ST USG
 POTASSIUM 616-5,880 ST USG
 SELENIUM 0.01-0.3 ST USG
 SODIUM 4-109 ST USG
 STRONTIUM 14-126 ST USG
 TITANIUM 1-42 ST USG
 ZINC 2-92 ST USG

QUERCUS ROBUR L.

"ENGLISH OAK"

2-ALPHA-ACETOXYFRIEDEL-3-ONE PL
 JSG
 CATECHIN BK HHB
 ELLAGITANNIN BK WICHTL
 3-FRIEDELANONE BK HHB
 FRIEDELIN BK HHB
 FRIEDELINOL BK HHB
 GALLIC-ACID BK 411/
 GALLOCATECHIN BK HHB
 GLUTIN-5(6)-EN-3-BETA-OL BK
 HHB
 GLUTIN-5(6)-EN-3-ON BK HHB
 2-HYDROXYDAMMAR-24-EN-3-ON BK
 HHB
 LEUCOCYANIDIN BK HHB
 LEUCODELPHINIDIN BK HHB
 MESOINOSITOL BK HHB
 PECTIN BK HHB
 PHLOBATANNIN BK HHB
 QUERCETIN BK HHB
 QUERCIN BK HHB
 L-(+)-QUERCITOL BK HHB
 RESIN BK HHB
 SCYLLITOL BK HHB
 BETA-SITOSTEROL BK HHB
 TANNIN 80,000-200,000 BK HHB 1/
 L-VIBURNITOL BK HHB

It is not clear to what species the HHB data reported herein pertain.

QUERCUS RUBRA L.

"NORTHERN RED OAK"

ALUMINUM 8.2 SD FUR 4/
 ALUMINUM 30-660 ST USG
 ANTIMONY 0.2 SD FUR
 ARSENIC 0.02 SD FUR
 ASH 20,000-66,000 ST USG
 BARIUM 0.1 SD FUR
 BARIUM 10-660 ST USG
 BORON 18 SD FUR
 BORON 3-66 ST USG
 BROMINE 1.6 SD FUR
 CADMIUM 0.02 SD FUR
 CALCIUM 947 SD FUR
 CALCIUM 5,200-23,760 ST USG
 CATECHIN WD HHB
 CHLORINE 49 SD FUR
 CHROMIUM 0.9 SD FUR
 CHROMIUM 0.06-3.3 ST USG
 COBALT 0.2 SD FUR
 COBALT 0-3.3 ST USG
 CONIFERALDEHYDE WD HHB
 COPPER 7.0 SD FUR
 COPPER 1.2-13.2 ST USG
 2,6-DIMETHOXYBENZOQUINONE WD
 HHB
 ELLAGIC-ACID WD HHB
 EUROPIUM 0.01 SD FUR
 FLUORINE 1.3 SD FUR
 GALLIC-ACID WD HHB
 GOLD 0.001 SD FUR
 HAFNIUM 0.1 SD FUR
 HAMAMELITANNIN BK HHB
 P-HYDROXYBENZALDEHYDE WD HHB
 IODINE 0.1 SD FUR
 IODINE 2-5 ST USG
 IRON 81 SD FUR
 IRON 12-343 ST USG
 LANTHANUM 0.04 SD FUR
 LANTHANUM 0.6-19.8 ST USG
 LEAD 0.01 SD FUR
 LEAD 1.4-17 ST USG
 LITHIUM 0.092-3.96 ST USG
 LUTETIUM 0.01 SD FUR
 LYONIRE SINOL WD HHB
 LYONISIDE WD HHB
 MAGNESIUM 500 SD FUR
 MAGNESIUM 200-8,580 ST USG
 MANGANESE 3.9 SD FUR
 MANGANESE 70-3,300 ST USG
 MOLYBDENUM 0.6 SD FUR
 MOLYBDENUM 0-4.62 ST USG

NICKEL 0.4 SD FUR
 NICKEL 0.16-9.9 ST USG
 PHOSPHORUS 112-1,254 ST USG
 POTASSIUM 8,485 SD FUR
 POTASSIUM 600-9,240 ST USG
 PROIOGUAIACONE WD HHB
 RESORCIN WD HHB
 RUBIDIUM 5 SD FUR
 RUBIDIUM 3.7-26 ST USG 3/
 SAMARIUM 0.04 SD FUR
 SCANDIUM 0.003 SD FUR 4/
 SCOPOLETIN WD HHB
 SELENIUM 0.02 SD FUR
 SILICON 20 SD FUR
 SILICON 68-2,442 ST USG
 SILVER 0-1.32 ST USG
 SINAPALDEHYDE WD HHB
 SODIUM 6.0 SD FUR
 SODIUM 12-396 ST USG
 STRONTIUM 1.3 SD FUR
 STRONTIUM 20-330 ST USG
 SULFUR 1,160 SD FUR
 SYRINGALDEHYDE WD HHB
 SYRINGARESINOL WD HHB
 TANNIN 160,000 BK HHB
 TANTALUM 0.01 SD FUR
 THORIUM 0.2 SD FUR
 TIN 0.4 SD FUR
 TITANIUM 3.2 SD FUR
 TITANIUM 0.2-20 ST USG
 TUNGSTEN 0.1 SD FUR
 URANIUM 0.03 SD FUR 4/
 VANADIUM 0.02 SD FUR
 VANADIUM 0.1-1.32 ST USG
 VANILLIN WD HHB
 YTTERBIUM 0.03 SD FUR
 YTTRIUM 0.2-6.6 ST USG
 ZINC 17 SD FUR 4/
 ZINC 4-138 ST USG

3/ Assumes stem has 10% ash 4/Fur=Furr et al, 1979.

QUERCUS STELLATA

WANGENH.

"POST OAK"

ALUMINUM 18-840 ST USG
 ASH 25,000-84,000 ST USG
 BARIUM 2-420 ST USG
 BORON 2-25 ST USG
 CADMIUM 0-1 ST USG
 CALCIUM 5,750-31,920 ST USG

CHROMIUM 0-1.68 ST USG
 COBALT 0-0.34 ST USG
 COPPER 1.2-42 ST USG
 FLUORINE 0-0.168 ST USG
 IODINE 3-5 ST USG
 IRON 17-420 ST USG
 LEAD 0.7-59 ST USG
 MAGNESIUM 175-5,880 ST USG
 MANGANESE 12-1,680 ST USG
 MERCURY 0-0.025 ST USG
 NICKEL 0-2.5 ST USG
 PHOSPHORUS 150-1,512 ST USG
 POTASSIUM 500-9,240 ST USG
 SELENIUM 0-0.04 ST USG
 SODIUM 5-134 ST USG
 STRONTIUM 5-126 ST USG
 TITANIUM 1-42 ST USG
 ZINC 4-52 ST USG

QUERCUS SUBER L.**“CORK OAK”**

ASH 1,000-40,000 CORK WOI
 BETULIN CORK HHB
 BETULINIC-ACID CORK HHB
 CELLULOSE 18,000-50,000 CORK WOI
 CERIODS 45,000-150,000 CORK WOI
 CYCLITOL CORK HHB
 FATTY-ACIDS 200,000-380,000 CORK
 WOI
 FRIEDELIN CORK HHB
 GLYCERIN 10,000-65,000 CORK WOI
 LIGNIN 126,000-180,000 CORK WOI
 PHELLOGENIC-ACID CORK HHB
 PHELLONIC-ACID CORK HHB
 PHLOBAPHENE CORK HHB
 PHLOIONIC-ACID CORK HHB
 PHLOIONOLIC-ACID CORK HHB
 SUBERIN CORK WOI
 SUBERINDIOL CORK HHB
 TANNIN 20,000-65,000 CORK HHB
 VANILLIN CORK HHB
 WATER 30,000-70,000 CORK WOI

QUERCUS VELUTINA LAM.**“BLACK OAK”**

ALUMINUM 24-434 ST USG
 ASH 24,000-62,000 ST USG
 BARIUM 20-620 ST USG
 BORON 2-31 ST USG
 CALCIUM 5,040-22,940 ST USG
 CHROMIUM 0.12-1.73 ST USG
 COBALT 0-2.29 ST USG

COPPER 1.5-31 ST USG
 IODINE 2-5 ST USG
 IRON 14-236 ST USG
 LANTHANUM 0.7-14.9 ST USG
 LEAD 1.5-31 ST USG
 LITHIUM 0.110-5.2 ST USG
 MAGNESIUM 235-6,820 ST USG
 MANGANESE 24-1,984 ST USG
 MOLYBDENUM 0-6.2 ST USG
 NICKEL 0.168-12.4 ST USG
 PHOSPHORUS 105-1,550 ST USG
 POTASSIUM 984-8,060 ST USG
 QUERCETIN PL HHB
 QUERCITRIN PL HHB
 RUBIDIUM 3.7-21 ST USG 1/
 SODIUM 14-539 ST USG
 STRONTIUM 16-186 ST USG
 TITANIUM 1-12 ST USG
 VANADIUM 0.12-0.93 ST USG
 YTTRIUM 0.24-2.5 ST USG
 ZINC 5-93 ST USG

1/ Assumes stem has 10% ash

QUILLAJA SAPONARIA MOLINA**“SOAPBARK”**

CALCIUM-OXALATE 110,000 BK AYL
 GALACTOSE BK HHB
 GALACTURONIC-ACID BK HHB
 SACCHAROSE BK HHB
 GLUCURONIC-ACID BK HHB
 QUILLAIC-ACID BK AYL
 SAPONINS 90,000-100,000 BK AYL
 STARCH BK AYL
 SUGAR BK AYL
 TANNIN 150,000 BK AYL HHB

QUISQUALIS INDICA L.**“RANGOON CREEPER”**

ARACHIDIC-ACID FR CCO
 ARSENIC 0.01 FR CAL
 ASH 65,000-69,519 SD WOI
 CALCIUM 1,430 FR CAL
 CARBOHYDRATES 486,000-519,786 SD
 WOI
 CELLULOSE 39,000-41,711 SD WOI
 CITRIC-ACID FR CCO
 COPPER 13 FR CAL
 CYANIDIN-MONOGLYCOSIDE FL WOI
 FAT 230,000-270,000 SD WOI
 GABA FR CCO
 GLUCOSAZON FR CCO

IRON 50 FR CAL
 LINOLEIC-ACID 20,700-24,300 SD WOI
 MAGNESIUM 1,040 FR CAL
 MALIC-ACID FR CCO
 MANGANESE 33 FR CAL
 MERCURY 0.01 FR CAL
 MYRISTIC-ACID 10,350-12,150 SD WOI
 OLEANOLIC-ACID FR CCO
 OLEIC-ACID FR CCO
 OLEIC-ACID 110,860-130,140 SD WOI
 PALMITIC-ACID FR CCO
 PALMITIC-ACID 67,160-78,840 SD WOI
 PENTOSAN FR CCO
 PHYTOSTEROLS FR CCO
 POTASSIUM 19,900 FR CAL
 POTASSIUM-QUISQUALATE FR CCO
 POTASSIUM-SULFATE 39,000-41,711 SD
 WOI
 PROTEIN 107,000-114,438 SD WOI
 QUISQUALIC-ACID FR CCO
 SODIUM 36 FR CAL
 STEARIC-ACID FR CCO
 STEARIC-ACID 20,930-24,570 SD WOI
 SUCCINIC-ACID FR CCO
 TARTARIC-ACID FR CCO
 TRIGONELLINE FR CCO
 WATER 65,000 SD WOI
 ZINC 22 FR CAL

RANUNCULUS BULBOSUS L.

“BULBOUS BUTTERCUP”

ANEMONIN PL CRC
 L-CAFFEYOYLGLUCOSE LF CRC
 PROTOANEMONIN PL CRC
 RANUNCULIN PL CRC

RAPHANUS SATIVUS L.

“RADISH”

ALANINE 220-4,265 RT USA
 ALUMINUM 6-185 RT AAS
 ARGININE 400-7,750 RT USA
 ARSENIC <0.01 RT AAS
 ASCORBIC-ACID 690-7,822 FR CRC
 ASCORBIC-ACID 810-7,043 LF CRC
 ASCORBIC-ACID 226-6,216 RT CRC USA
 ASH 10,000-185,700 RT AAS
 ASPARTIC-ACID 480-9,300 RT USA
 BORON 0.6-64 RT AAS BOB
 BROMINE <1 RT AAS
 N-BUTYRALDEHYDE LF HHB
 CADMIUM 0.005-0.57 RT AAS
 CAFFEIC-ACID 91 RT CRC(FNS)

CALCIUM 260-10,130 FR CRC
 CALCIUM 2,380-19,130 LF CRC
 CALCIUM 190-8,570 RT AAS CRC USA
 CALCIUM 3,670 SD CAL
 CARBOHYDRATES 54,000-701,000 FR
 CRC
 CARBOHYDRATES 57,000-496,000 LF
 CRC
 CARBOHYDRATES 36,000-757,000 RT
 CRC
 BETA-CAROTENE 0.3-26.2 FR CRC
 BETA-CAROTENE 24.7-214 LF CRC
 BETA-CAROTENE 0-1 RT CRC
 CHROMIUM 0.01-0.14 RT AAS
 COBALT <0.005 RT AAS
 COPPER 0.3-8 RT AAS USA
 COPPER 6 SD CAL
 P-COUMARIC-ACID 91 RT CRC(FNS)
 CYSTINE 50-970 RT USA
 DIALLYLSULFIDE RT HHB
 ERUCIC-ACID SD CCO
 FAT 3,000-50,000 FR CRC
 FAT 6,000-52,000 LF CRC
 FAT 1,000-187,000 RT CRC USA
 FAT 298,000-410,000 SD CRC
 FERULIC-ACID 16 RT CRC(FNS)
 FIBER 11,000-147,000 FR CRC
 FIBER 11,000-96,000 LF CRC
 FIBER 5,200-176,000 RT CRC USA
 FLUORINE <0.1 RT AAS
 FOLACIN 0.3-5.8 RT USA
 GLUCOBRASSICIN PL CCO
 GLUCOCAPPARIN SD HHB
 GLUCOLEPIDIIN SD HHB
 GLUCOPUTRANJIVIN RT HHB
 GLUCORAPHANIN RT HHB
 GLUTAMIC-ACID 1,320-25,580 RT USA
 GLYCEROL-SINAPATE SD CCO
 GLYCINE 220-4,265 RT USA
 BETA-HEXYLALDEHYDE SD CCO
 HISTIDINE 130-2,520 RT USA
 INDOLEACETIC-ACID RT HHB
 INDOLEACETONITRILE RT HHB
 IRON 4-295 FR CRC
 IRON 41-357 LF CRC
 IRON 2-189 RT CRC USA
 IRON 120 SD CAL
 ISOBUTYRALDEHYDE LF HHB
 ISOLEUCINE 300-5,815 RT USA
 KILOCALORIES 340-3,370 FR CRC
 KILOCALORIES 330-2,870 LF CRC
 KILOCALORIES 170-3,510 RT CRC USA
 LEAD 0.01-0.57 RT AAS
 LEUCINE 370-7,170 RT USA

LINOLEIC-ACID 160-3,100 RT USA
 LINOLENIC-ACID 290-5,620 RT
 USA
 LYSINE 350-6,785 RT USA
 MAGNESIUM 3,960 SD CAL
 MAGNESIUM 85-3,570 RT AAS USA
 MANGANESE 0.5-20 RT USA
 MANGANESE 40 SD CAL
 MERCURY 0.0004-0.014 RT AAS
 METHIONINE 70-1,355 RT USA
 S-METHYL-L-CYSTEINSULFOXIDE RT
 HHB
 METHYL-MERCAPTAN SD CCO
 4-METHYLSULFOXIDEBUTEN-(3)-YL-
 CYANIDE 200 SD HHB
 MOLYBDENUM <0.1 RT AAS
 MUFA 170-3,295 RT USA
 MYRISTIC-ACID 0 RT USA
 NIACIN 2-59 FR CRC
 NIACIN 40-348 LF CRC
 NIACIN 3-68 RT CRC
 NICKEL 0.01-0.71 RT AAS
 NITROGEN 2,000-38,570 RT AAS
 OLEIC-ACID 160-3,100 RT USA
 OXALIC-ACID 92 RT WBB
 PALMITIC-ACID 260-5,040 RT USA
 PANTOTHENIC-ACID 0.8-18 RT USA
 PHENYLALANINE 230-4,455 RT
 USA
 PHOSPHORUS 240-10,526 FR CRC
 PHOSPHORUS 300-2,609 LF CRC
 PHOSPHORUS 160-5,850 RT AAS CRC
 USA
 PHYTOSTEROLS 70-1,355 RT USA
 POTASSIUM 2,070-20,495 FR CRC
 POTASSIUM 5,000-43,478 LF CRC
 POTASSIUM 2,215-85,700 RT AAS CRC
 USA
 POTASSIUM 11,900 SD CAL
 PROLINE 180-3,490 RT USA
 PROTEIN 13,000-257,000 FR CRC
 PROTEIN 33,000-287,000 LF CRC
 PROTEIN 5,260-182,000 RT CRC USA
 PROTEIN 236,000-336,000 SD CRC
 PUFA 450-8,720 RT USA
 PUTRESCINE LF HHB
 RAPHANIN SD CCO
 RAPHANUSIN-A RT HHB
 RAPHANUSIN-B RT HHB
 RAPHANUSIN-C RT HHB
 RAPHANUSIN-D RT HHB
 RIBOFLAVIN 0.3-5.3 FR CRC
 RIBOFLAVIN 2.6-24 LF CRC
 RIBOFLAVIN 0.3-9.3 RT CRC USA

RUBIDIUM 0.44-15.7 RT AAS
 SELENIUM <0.002 RT AAS
 SERINE 210-4,070 RT USA
 SILICON 10-425 RT AAS
 SINAPIC-ACID <0.5 RT CRC(FNS)
 SINIGRIN SD HHB
 SODIUM 50-495 FR CRC
 SODIUM 1,100-9,565 LF CRC
 SODIUM 100-5,020 RT CRC USA
 SODIUM 134 SD CAL
 SPERMINIDINE LF HHB
 SPERMINE LF HHB
 STEARIC-ACID 40-775 RT USA
 L-SULFORAPHENE RT HHB
 SULFUR 350-6,140 RT AAS
 THIAMIN 0.3-7.9 FR CRC
 THIAMIN 1.4-7.0 LF CRC
 THIAMIN 0.3-9.7 RT CRC
 THREONINE 290-5,620 RT USA
 TRIACONTANE SD HHB
 TRYPTOPHAN 40-775 RT USA
 TYROSINE 130-2,520 RT USA
 VALINE 320-6,200 RT USA
 VIT-B6 0.7-14.5 RT USA
 WATER 899,000-923,000 FR CRC
 WATER 856,000 LF CRC
 WATER 926,000-945,000 RT CRC
 ZINC 2-72 RT USA
 ZINC 29 SD CAL

AAS=ACTA AGRIC SCAN SUPPL 22;
 H2O=93% ZMB=14.28 X APB

***RAUVOLFIA SERPENTINA* (L.)
 BENTH. EX KURZ**

"INDIAN SNAKEROOT"
 "SERPENTINE WOOD"

ALKALOIDS 15,000-24,000 RT WOI
 ALKALOIDS 1,300-2,000 SD WOI
 AJMALEXINE 2,000-3,000 RT WOI
 AJMALICINE RT ALK
 AJMALINE RT ALK
 AJMALININE RT ALK
 ALLOYOHIMBINE RT ALK
 ASK 9,000-19,000 SD WOI
 CALCIUM 3,400-6,900 SD WOI
 CHANDRINE RT ALK
 CORYNANTHINE PL ALK
 DESERPIDINE PL CRC
 2,6-DIMETHOXYBENZOQUINONE PL
 HHB
 3-EPI-ALPHA-YOHIMBINE RT ALK
 EUDESMIC-ACID PL HHB

FAT 10,000-97,000 SD WOI
 FIBER 565,000-755,000 SD WOI
 ISOAJMALINE RT ALK
 ISORAUHIMBINE RT ALK
 ISORAUNITIDINE PL JSG
 ISOSANDWICINE PL HHB
 ISOYOHIMBINE RT ALK
 11-METHOXY-DELTA-TOHIMBINE RT
 ALK
 METHYL-RESERPATE RT ALK
 NEOAJMALINE RT ALK
 NITROGEN 5,500-16,000 SD WOI
 PAPAVERINE RT ALK
 PHOSPHORUS 700-2,200 SD WOI
 RAUBASINE PL CCO
 RAUGALLINE PLK ALK
 RAUHIMBINE RT ALK
 RAUNATINE RT ALK
 RAUNOLININE RT CRC
 RAUPINE RT ALK
 RAUWOLFININE PL ALK
 RAUWOLSCINE PL ALK
 RENOXIDINE PL ALK
 RESAJMALINE 5,000-8,000 RT WOI
 RESCIDINE PL JSG
 RESCINNAMINE 25-75 RT WOI
 RESERPILINE RT ALK
 RESERPINE 100-2,000 RT WOI
 RESERPININE RT ALK
 RESERPOXIDINE RT ALK
 SANDWICINE PL HHB
 SANDWICOLIDINE PL JSG
 SARPAGINE RT ALK
 SERPAJMALINE 13,000-16,000 RT
 WOI
 SERPAKRINE PL ALK
 SERPENTINE RT CRC
 SERPENTININE PL JSG
 SERPINE RT ALK
 SERPININE RT ALK
 SERPENTININE RT ALK
 SERPOSTEROL RT WOI
 STARCH 126,000-203,000 SD WOI
 STIGMASTEROL PL HHB
 TETRAPHYLICINE RT WOI
 THEBAINE RT ALK
 3,4,5-TRIMETHOXYBENZOIC-ACID PL
 HHB
 VOMALIDINE PL HHB
 VIMILENINE PL HHB
 WATER 55,000-87,000 SD WOI
 YOHIMBINE RT ALK
 GAMMA-YOHIMBINE RT ALK
 DELTA-YOHIMBINE RT ALK

RAUVOLFIA TETRAPHYLLA L.

"FOUR-LEAF DEVILPEPPER"
 "PINQUE-PINQUE"

AJMALICINE PL HHB
 AJMALINE PL ALK
 ALKALOIDS 4,000-18,000 LF WOI
 ALKALOIDS 600-2,000 RT WOI
 ALKALOIDS 1,000-5,000 ST WOI
 ALSTONINE PL HHB
 ARICINE LF WOI
 CANEMBRINE PL CRC
 CARPAGINE PL JSG
 CHALCHUPINE-A PL CRC
 CHALCHUPINE-B PL CRC
 CORYNANTHINE PL HHB
 DESERPIDINE RT ALK
 ISORAUNESCINE PL CRC
 ISORESERPILINE PL HHB
 ISORESERPININE LF WOI
 PSEUDORESERPINE PL CRC
 PSEUDOYOHIMBINE PL CRC
 RAUJEMIDINE PL CRC
 RAUVOLSINE PL CRC
 RENOSYDINE PL HHB
 RESERPIDINE PL JSG
 RESERPILINE LF WOI
 RESERPINE RT ALK
 RESERPININE RT ALK
 SARPAGINE PL HHB
 SERPENTINE PL HHB
 SERPENTININE RT ALK
 SERPOSTEROL RT WOI
 TETRAPHYLICINE RT ALK
 TETRAPHYLLINE RT ALK
 ALPHA-YOBIMBINE 5,000 LF WOI
 ALPHA-YOBIMBINE 1,000 RT BK WOI
 ALPHA-YOBIMBINE 2,000 ST BK WOI
 DELTA-YOHIMBINE RT ALK
 BETA-YOHIMBINE RT HHB
 EPSILON-YOHIMBINE RT ALK

(INCLUDES *R. CANESCENS*)

RAUVOLFIA VOMITORIA AFZEL.

"AFRICAN SNAKEROOT"

17-ACETYL-AJMALINE PL JSG
 AJMALICINE RT ALK
 AJMALINE RT ALK
 AJMALININE RT ALK
 ALSTONINE RT ALK
 ARICINE LF ALK
 CARAPANAUBINE LF ALK

DEACETYLDEFORMYLAKUAMMILINE
PL JSG
DEACETYLDEFORMYLPICRALINE PL
JSG
ISOAJMALINE RT ALK
ISOCARAPANAUBINE PL JSG
ISORESERPILINE LF ALK
ISORESERPILINE-PSEUDOINDOXYL LF
ALK
ISOSANDWICENE PL JSG
MITORIDINE RT ALK
NEONORRESERPINE PL JSG
PERAKINE PL ALK
PICRININE LF ALK
PURPELINE RT ALK
RAUGALLINE PL ALK
RAUMITORINE RT ALK
RAUNITIDINE PL JSG
RAUVANINE RT ALK
RAUVOMILINE PL JSG
RAUVOMITINE RT ALK
RAUVOXINE LF ALK
RAUVOXININE LF ALK
RENOXIDINE PL ALK
RESCIDINE RT ALK
RESCINNAMINE RT ALK
RESERPILINE RT ALK
RESERPINE RT ALK
RESERPOXIDINE RT ALK
SARPAGINE RT ALK
SERADAMINE RT ALK
SEREDINE RT ALK
SEREPENTENINE RT ALK
SERPENTICINE PL JSG
STIGMASTEROL RT HHB
TETRAHYDROALSTONINE LF ALK
VIMIFOLINE LF ALK
VOMALIDENE RT ALK
VOMILENINE PL ALK
ALPHA-YOHIMBINE PL ALK
YOHIMBINE PL ALK

REHMANNIA GLUTINOSA
(GAERTN.) LIBOSCH.

“CHINESE FOXGLOVE”

ALANINE 3,000-9,000 RT CCO 1/
ARGININE 42,000-87,000 RT CCO 1/
ASPARTIC-ACID 1,000-39,000 RT
CCO 1/
AUCUBIN RT CCO
CALCIUM 1,150 RT SMO
CATALPOL 1,100 RT CCO

COPPER 4 RT SMO
D-FRUCTOSE 17,000-56,000 RT CCO 1/
GABA 4,000-31,000 RT CCO
D-GALACTOSE 7,000-53,000 RT CCO
GLUCOSAMINE 8,000-26,000 RT CCO
D-GLUCOSE 17,000-91,000 RT CCO 1/
GLUTAMIC-ACID 2,000-53,000 RT CCO
GLYCINE 1,000-2,000 RT CCO
HISTIDINE 1,000-4,000 RT CCO
IRON 920 RT SMO
ISOLEUCINE 2,000-9,000 RT CCO
LEUCINE 2,000-5,000 RT CCO
LYSINE 2,000-4,000 RT CCO
MAGNESIUM 1,190 RT SMO
MANGANESE 24 RT SMO
MANNINOTRIOSE 10,000-56,000 RT
CCO 1/
MANNITOL 10,000-74,000 RT CCO 1/
MELITTOSIDE RT CCO
METHIONINE 1,000 RT CCO
PHENYLALANINE 1,000-6,000 1/
PHOSPHORIC-ACID 11,000-21,000 RT
CCO
POTASSIUM 9,730 RT SMO
PROLINE 3,000-4,000 RT CCO
RAFFINOSE 36,000-87,000 RT CCO 1/
REHMA GLUTINS PL JSG
REHMANNIOSIDES PL JSG
SERINE 1,000-9,000 RT CCO 1/
BETA-SITOSTEROL RT CCO
SODIUM 626 RT SMO
STACHYOSE 321,000-649,000 RT
CCO 1/
SUCROSE 28,000-81,000 RT CCO 1/
THREONINE 1,000-16,000 RT CCO 1/
TYROSINE 1,000-3,000 RT CCO 1/
VALINE 1,000-7,000 RT CCO 1/
VERBASCOSIDE 27,000-46,000 RT
CCO 1/
ZINC 14 RT SMO

1/ Amino acid and carbohydrate data from
CCO may be misinterpreted; view with
scepticism, especially verbascoside.

RHAMNUS PURSHIANUS DC.

“CASCARA SAGRADA”

ALOE-EMODIN BK
ALOE-EMODIN-8-MONO-BETA-
GLUCOSIDE BK
ALONIN
ALUMINUM 99 BK PED

ANTHRAQUINONES 60,000-100,000
 BK
 ASCORBIC-ACID 0 BK PED
 ASH 67,000 BK PED
 BARBALOIN BK
 CALCIUM 14,800 BK PED
 CARBOHYDRATES 809,000 BK PED
 BETA-CAROTENE 45 BK PED
 (SEEMS HIGH)
 CASANTHRANOL BK
 CASCAROSIDES 40,000-65,000 BK
 CASCARIN
 CHROMIUM 6 BK PED
 CHRYSALOIN BK PED
 CHRYSOPHANIC-ACID
 CHRYSOPHANOL BK 411/
 COBALT 116 BK PED
 DEOXYBARBALOIN BK
 EMODIN BL 411/
 FAT 20,000-32,000 BK PED
 FIBER 310,000 BK PED
 FRANGULIN BK PED
 IRON 230 BK PED
 ISOEMODIN
 KILOCALORIES 2,370 BK PED
 LINOLEIC-ACID
 MAGNESIUM 1,590 BK PED
 MALIC-ACID
 MANGANESE 14 BK PED
 MYRISTIC-ACID
 NIACIN 29 BK PED
 OXANTHRONE
 PALMIDINS BK 411/
 PHOSPHORUS 570 BK PED
 POTASSIUM 3,980 BK PED
 PROTEIN 91,000 BK PED
 PURSHIANIN
 QUEBRACHOL
 RESIN
 RHAMNOL
 RHAMNUSTOXIN
 RIBOFLAVIN 0 BK PED
 SELENIUM 11 BK PED
 SILICON TR BK PED
 SODIUM 93 BK PED
 SYRINGIN-ACID
 TANNIC-ACID
 TANNIN
 THIAMIN 0 BK PED
 TIN 5.1 BK PED
 1,6,8-TRIHYDROXY-3-METHYL-9-
 GLUCOSYL-ANTHRAQUINONE
 WATER 723,000 BK PED
 ZINC TR BK PED

RHEUM OFFICINALE BAILLON

"CHINESE RHUBARB"

ALOE-EMODIN RT HHB
 ALOE-EMODIN-8-MONO-BETA-D-
 GLUCOSIDE RT HHB
 ANTHRACENES 30,000-50,000 RT HHB
 ANTHRAQUINONES 50,000 RT AYL
 CAFFEIC-ACID RT HHB
 CALCIUM-OXALATE 60,000 RT AYL
 HHB
 CATECHIN-TANNINS RT AYL
 D-CATECHOL RT CCO
 CHRYSAPHANOL RT HHB
 CHRYSOPHANOL-1-MONO-BETA-D-
 GLUCOSIDE
 RT HHB
 CINNAMIC-ACID RT AYL
 1,8-DIHYDROXY-3-
 CARBOXYANTHRAQUINONE
 RT HHB
 1,8-DIHYDROXY-3-
 HYDROXYMETHYLANTRHAQUINONE
 RT HHB
 1,8-DIHYDROXY-6-METHOXY-3-
 METHYLANTHRAQUINONE RT HHB
 1,8-DIHYDROXY-3-
 METHYLANTHRAQUINONE
 DIISOBUTYL-PHTHALATE RT AYL
 EMODIN RT HHB
 EMODIN-1-MONO-BETA-D-GLUCOSIDE?
 RT HHB
 EMODIN-8-MONO-BETA-D-GLUCOSIDE?
 RT HHB
 D-EPICATECHIN-GALLATE RT AYL
 FERULIC-ACID RT AYL
 FRANGULIC-ACID RT HHB
 FRUCTOSE RT AYL
 GALLIC-ACID RT AYL
 BETA-D-GLUCOGALLIN RT CCO
 GLUCOSE RT AYL
 OLEIC-ACID RT AYL
 PALMITIC-ACID RT AYL
 PECTIN RT HHB
 PHENYLPROPIONIC-ACID RT AYL
 PHYSCION-1-MONO-BETA-D-GLU-
 COSIDE? RT HHB
 PHYSCION-8-MONO-BETA-D-GLU-
 COSIDE? RT HHB
 PHYTOSTEROLS RT HHB
 RESIN RT AYL
 RHAMNOXANTHIN RT HHB
 RHEIN RT HHB

RHEIN-8-MONOGLUCOSIDE RT HHB
 RHEINOSIDES 12,900 RT IJO14:210
 RHEUM-EMODIN RT HHB
 RUTIN RT AYL
 STARCH 150,000-160,000 RT AYL HHB
 1,8,6-TRIHYDROXY-3-METHYLANTHRAQUINONE
 VEROSTEROL? RT HHB

RHEUM PALMATUM L.

“CHINESE RHUBARB”

ALOE-EMODIN RT CCO
 ALOE-EMODIN-8-BETA-D-GLUCOSIDE
 PL JSG
 CALCIUM 9,630-12,400 RH CAL SMO
 D-CATECHOL RT CCO
 CHRYSOPHANOL 690-3,190 RT IJO14:209
 CINNAMIC-ACID RT CCO
 COPPER 6-10 RH CAL SMO
 EMODIN RT CCO
 GALLIC-ACID RT CCO
 GLUCOSE RT CCO
 4-(P-HYDROXYPHENYL)-2-BUTANONE-
 BETA-D-GLUCOSIDE RT CCO
 HYPERIN RT CCO
 IRON 100-180 RH CAL SMO
 MAGNESIUM 1,980-2,560 RH CAL SMO
 MANGANESE 19-46 RH CAL SMO
 PHYSCION RT CCO
 PHYSCION-DIGLUCOSIDE RT ABS
 PHYSCION-8-O-BETA-D-
 GENTIOBIOSIDE RT ABS
 POTASSIUM 6,330-21,600 RH CAL SMO
 QUERCITRIN RT CCO
 RHEIN RT CCO
 RHEINOSIDES 12,900 RT IJO14:210
 RHEOSMIN RT CCO
 SENNOSIDE-A 2,000-8,740 RT IJO14:209
 SENNOSIDE-B RT CCO
 SODIUM 140-175 RH CAL SMO
 TANNINS 50,000-100,000 RT ABS
 TETRARIN RT CCO
 3,5,4'-TRIHYDROXYSTILBENE-4'-O-
 BETA-D-GLUCOPYRANOSIDE RT CC
 ZINC 9-10 RH CAL SMO

RHEUM RHABBARBARUM L.

“RHUBARB”

ACETIC-ACID LF-ST HHB
 ALOE-EMODIN-8-O-GLUCOSIDE RT
 IJO14:209
 ALUMINUM 1-80 LF-ST AAS 1/

ANHYDRORHAPONTIGENIN RT HHB
 ANTHRAQUINONE-GLYCOSIDES LF
 HHB
 ANTHRONES 10,000-15,000 LF HHB
 ARSENIC >0.01 LF-ST AAS
 ASCORBIC-ACID 80-2,581 LF-ST CRC
 USA
 ASCORBIC-ACID 110-1,833 LF CRC
 ASH 8,000-160,000 LF-ST AAS CRC
 ASH 10,000-194,000 LF CRC
 BORON 0.1-36 LF-ST AAS BOB
 BROMINE 1-20 LF-ST AAS
 CADMIUM 0.005-0.6 LF-ST AAS
 CAFFEIC-ACID 8 LF-ST CRC(FNS)
 CALCIUM 600-18,462 LF-ST CRC
 CALCIUM 470-14,400 LF CRC USA
 CALCIUM-OXALATE LF HHB
 CARBOHYDRATES 37,000-774,000 LF-ST
 CRC
 CARBOHYDRATES 41,000-683,000 LF
 CRC
 BETA-CAROTENE 0.6-12 LF-ST CRC
 JAF37:657
 BETA-CAROTENE 0.3-5 LF CRC
 (+)-CATECHIN RT IJO14:209
 (+)-CATECHIN-5-O-GLUCOSIDE RT
 IJO14:209
 CHROMIUM 0.005-0.1 LF-ST AAS
 CHRYSARONE RT WOI
 CHRYSARONE-METHYL-ETHER RT
 HHB
 CHRYSOPHANIC-ACID EO RT WOI
 CHRYSOPHANIN RT WOI
 CHRYSOPHANOL RT HHB
 CHRYSOPHANOL-1-O-GLUCOSIDE RT
 IJO14:209
 CHRYSOPHANOL-8-O-GLUCOSIDE RT
 IJO14:209
 CHRYSOPONTIN RT WOI
 CHRYSORHAPONTIN RT WOI
 2-O-CINNAMOYLGLUCOGALLIN RT
 IJO14:209
 CITRIC-ACID LF-ST HHB
 COBALT .005-0.1 LF-ST AAS
 COPPER 0.2-5.2 LF-ST AAS USA
 P-COUMARIC-ACID 44 LF-ST CRC(FNS)
 P-COUMARIC-ACID RT HHB
 CYANIDIN-3-GLUCOSIDE LF HHB
 CYANIDIN-3-RUTINOSIDE LF HHB
 DESOXYRHAPONTICIN RT HHB
 1,6-DI-O-GALLOYL-GLUCOSE RT
 IJO14:209
 DIHYDROXYGLUTAMIC-ACID LF HHB
 EMODIN RT IJO14:209

EMODIN-8-O-GLUCOSIDE RT
 IJO14:209
 EMODIN-METHYL-ETHER RT HHB
 EO RT WOI
 (-)-EPICATECHIN RT IJO14:209
 (-)-EPICATECHIN-3-O-GALLATE RT
 IJO14:209
 FAT 1,000-32,000 LF-ST CRC
 FAT 1,000-65,000 LF CRC
 FERULIC-ACID 8 LF-ST CRC(FNS)
 FERULIC-ACID RT HHB
 FIBER 3,000-135,000 LF-ST CRC WOI
 FIBER 7,000-125,000 LF CRC
 FLUORINE 0.1-4 LF-ST AAS
 FOLACIN 0.06-0.1 LF-ST USA
 FUMARIC-ACID LF-ST HHB
 FRANGULA-EMODIN-ANTHRONE LF
 GALLIC-ACID 53 LF-ST CRC(FNS)
 GALLIC-ACID RT WOI
 GALLIC-ACID-3-O-(6'-O-GALLOYL)-
 GLUCOSIDE RT IJO14:209
 GALLIC-ACID-4-O-(6'-O-GALLOYL)-
 GLUCOSIDE RT IJO14:209
 6-O-GALLOYL-GLUCOSE RT IJO14:209
 1-O-GALLOYL-GLYCEROL RT IJO14:209
 GLUCOCHRYsarONE RT HHB
 GLYCOCHRYsarONE RT WOI
 GLYCOGALLIN RT WOI
 4-(P-HYDROXYPHENYL)BUTANONE-O-
 GLUCOSIDE RT IJO14:209
 6-HYDROXYMUSIZIN-8-O-GLUCOSIDE
 RT IJO14:209
 IRON 1-154 LF-ST AAS CRC USA
 IRON 3-250 LF CRC
 ISOEMODIN RT HHB
 ISOLINDLEYIN RT IJO14:209
 ISOQUERCITRIN LF HHB
 ISORHAPONTIGENIN RT WOI
 LACTIC-ACID LF-ST HHB
 LEAD 0.02-1 LF-ST AAS
 LINDLEYIN RT IJO14:209
 LUTEIN 1.7-34 LF-ST JAF37:657
 MAGNESIUM 90-1,975 LF-ST AAS USA
 MAGNESIUM-OXALATE LF-ST HHB
 MALIC-ACID LF-ST HHB
 MANGANESE 2-35 LF-ST USA
 MERCURY 0.002-0.14 LF-ST AAS
 METHYL-CHRYsOPHANIC-ACID RT
 WOI
 MOLYBDENUM >0.1 LF-ST AAS
 NIACIN 2-57 LF-ST CRC
 NIACIN 1-33 LF CRC
 NICKLE 0.1-4 LF-ST AAS
 NITROGEN 1,100-22,000 LF-ST AAS
 OXALIC-ACID 4,400-13,360 LF-ST WBB
 WOI
 OXALIC-ACID 3,000-11,000 LF WOI
 PANTOTHENIC-ACID 0.8-13.3 LF-ST
 USA
 PECTINS 1,020 LF-ST WOI
 PHOSPHORUS 100-3,462 LF-ST CRC
 WOI
 PHOSPHORUS 160-3,472 LF CRC
 PHYSCION RT HHB
 PHYSCION-8-O-GLUCOSIDE RT
 IJO14:209
 PICEATANNOL-3'-O-GLUCOSIDE
 IJO14:209
 POTASSIUM 2,510-66,400 LF-ST AAS
 CRC USA
 PROCYANIDIN-B2-3,,3'-DI-O-GALLATE
 RT IJO14:209
 PROCYANIDIN-B1,3'-O-GALLATE RT
 IJO14:209
 PROTEIN 4,000-115,000 LF-ST CRC
 PROTEIN 7,000-276,000 LF CRC
 PROTOCATECHUIC-ACID <0.5 LF-ST
 CRC(FNS)
 QUERCETIN-3-GLUCOSIDE LF-ST WOI
 QUERCETIN-3-RHAMNOSIDE LF-ST
 WOI
 QUERCETIN-3-RUTINOSIDE LF-ST WOI
 RHAPONTIC-ACID RT WOI
 RHAPONTICIN 14,200 RT WOI
 RHAPONTIGENIN RT HHB
 RHEIN RT IJO14:209
 RHEINOSIDES 12,900 RT IJO14:210
 RIBOFLAVIN 0.3-14 LF-ST CRC
 RIBOFLAVIN 0.2-3 LF CRC
 RUBIDIUM 1.1-58 LF-ST AAS
 RUTIN 6,000 LF WOI
 SELENIUM <0.002 LF-ST AAS
 SENNOSIDE-A RT IJO14:209
 SENNOSIDE-B RT IJO14:209
 SILICON 3-200 LF-ST AAS
 SINAPIC-ACID 6 LF-ST CRC(FNS)
 SINAPIC-ACID RT HHB
 SODIUM 20-855 LF-ST CRC USA
 SUCCINIC-ACID LF-ST HHB
 SULFUR 62-1,240 LF-ST AAS
 THIAMIN 0.2-6.5 LF-ST CRC USA
 THIAMIN 0.2-3.3 LF CRC
 ALPHA-TOCOPHEROL 2-48 LF-ST
 TOT
 ALPHA-TOCOPHEROL 1,197-1,238 LF
 CCG
 TORACHRYsONE-8-O-GLUCOSIDE RT
 IJO14:209

1,2,6-TRI-O-GALLOYL-GLUCOSE RT
IJ014:209
3,3',5'-TRIHYDROXY-4'-
METHOXYSTILBEN-3-BETA-D-
GLUCOPYRANOSIDE
3,5,4'-TRIHYDROXYSTILBENE-4'-O-
GLUCOSIDE RT IJ014:209
3,5,4'-TRIHYDROXYSTILBENE-4'-O-
(6"-O-GALLOYL)-GLUCOSIDE RT
IJ014:209
VANILLIC-ACID 4 LF-ST CRC(FNS)
WATER 927,000-950,000 LF ST AAS WOI
WATER 900,000 LF WOI
ZINC 1-46 LF-ST AAS USA

1/ AAS=ACTA AGRIC SCAN SUPPL.22;
H2O=95% zmb=20 X APB (INCLUDED R.
RHAPONTICUM)

RHIZOPHORA MANGLE L.

"RED MANGROVE"

ASH 89,000-101,000 LF CRC EB19:119
BORON 83 LF EB19:119
CALCIUM 13,500 LF EB19:119
CARBOHYDRATES 732,000-770,000 LF
CRC EB19:119
CAROTENE? 6 (-27,800) LF EB19:119
CATECHIN-TANNINS 300,000-400,000
BK HHB
CHOLINE ?460 LF EB19:119
CHLOROPHYLL 890-2,230 LF EB19:119
COBALT 5 LF EB19:119
COPPER 35 LF EB19:119
FAT 34,000-36,000 LF CRC EN19:119
FIBER 139,000-145,000 LF CRC EB19:119
FOLIC-ACID 6.8 (-?320) LF EB19:119
GUM BK HHB
IODINE ?540 LF EB19:119
IRON 152 LF EB19:119
MAGNESIUM 8,800 LF EB19:119
MANGANESE 300 LF EB19:119
NIACIN ?2,400 LF EB19:119
PANTOTHENIC-ACID 53 LF EB19:119
PHOSPHORUS 1,400 LF EB19:119
POTASSIUM 6,500 LF EB19:119
PROTEIN 75,000-107,000 LF CRC
EB19:119
RIBOFLAVIN ?190 LF EB19:119
SODIUM 9,200 LF EB19:119
SULFUR 7,900 LF EB19:119
TANNIC-ACID 116,800 LF EB19:119
TANNIN 10,000-520,000 BK EB19:113
THIAMIN ?130 LF EB19:119

WATER 656,000 LF EB19:119
XANTHOPHYLLS 37 LF EB19:119
ZINC 43 LF EB19:119

Econ. Bot. data based on Morton's report for
leafmeal. I suspect vitamin data are
magnitudes too high. Amino acid data were
so bad that I didn't transcribe.

RHODODENDRON DAURICUM L.

"CHINESE ALPENROSE"

ANDROMEDOTOXIC PL JSG
AVICULARIN PL CCO
AZALEATIN PL CCO
CAMPHOR PL JSG
8-DEMETHYFARREROL PL JSG
DIHYDROQUERCETIN PL CCO
ALPHA-EUDESOL PL JSG
BETA-EUDESOL PL JSG
GAMMA-EUDESOL PL JSG
FARREROL PL CCO
GERMACRONE PL CCO
GOSSYPETIN PL CCO
HYDROQUINONE PL CCO
P-HYDROXYBENZOIC-ACID PL CCO
HYPERIN PL CCO
HYPEROSIDE PL JSG
ISOHYPEROSIDE PL JSG
KAEMPFEROL PL JSG
MENTHOL PL JSG
MYRICETIN PL CCO
QUERCETIN PL JSG
SCOPOLETIN PL CCO
SELINANE PL CCO
GAMMA-SELINENE LF CCO
UMBELLIFERONE PL JSG
URSOLIC-ACID PL CCO
VANILLIC-ACID PL CCO

*RHODODENDRON**FERRUGINEUM L.*

"RUSTY-LEAVED ALPENROSE"

ACETYLANDROMEDOL LF HHB
ALPHA-AMYRIN LF HHB
BETA-AMYRIN LF HHB
ARBUTIN LF HHB
CAMPANULIN LF HHB
CITRIC-ACID LF HHB
EPIFRIEDELIN LF HHB
FRIEDELIN LF HHB
RHODODENDRIN LF HHB

TANNIN LF HHB
 URSOLIC-ACID LF HHB

RHODODENDRON MOLLE (BL.)
 G.DON

“YELLOW AZALEA”

ANDROMEDOTOXIN FL CCO
 ERICOLIN FL CCO
 RHODOJAPONINS FL CCO
 RHOMITOXIN PL JSG

RHODODENDRON PONTICUM L.

“PONTIC ALPENROSE”

ACETYLANDROMEDIENOL LF HHB
 ACETYLANDROMEDOL LF HHB
 DELTA-10(18)-ACETYLANDROMEDOL
 LF HHB
 ALPHA-AMYRIN PL HHB
 ANDROMEDOL LF HHB
 ANDROMEDOLDITERPENES LF HHB
 ARBUTIN PL HHB
 CAFFEIC-ACID PL HHB
 (+)-CATECHIN LF HHB
 CHLOROGENIC-ACID PL HHB
 (-)-EPICATECHIN LF HHB
 FRIEDELIN PL HHB
 (+)-GALLOCATECHIN LF HHB
 GOSSYPETIN PL HHB
 MALVIDIN-3,5-DIGLUCOSIDE PL HHB
 MALVIN PL HHB
 MYRICETIN PL HHB
 RHODODENDRIN PL HHB
 SIMIARENOL LF HHB
 BETA-SITOSTEROL PL HHB
 TANNIN 50,000-120,000 LF HHB
 URSOLIC-ACID LF HHB
 UVAOL LF HHB

RHODYMENIA PALMATA (AN
 ALGA)

“DULSE”

ALUMINUM 615 PL PED
 ARSENIC 33 PL PED
 ASCORBIC-ACID 120 PL PED
 ASH 182,000 PL PED
 CALCIUM 6,320 PL PED
 ALPHA-CAROTENE PL JSG
 BETA-CAROTENE 48PL PED
 CHROMIUM 27 PL PED
 COBALT 150 PL PED

ALPHA-CRYPTOXANTHIN PL JSG
 BETA-CRYPTOXANTHIN PL JSG
 IRON 792 PL PED
 LEAD 3.5 PL PED
 LUTEIN PL JSG
 MAGNESIUM 5,930 PL PED
 MANGANESE 37 PL PED
 MERCURY 26 PL PED
 NIACIN 32 PL PED
 PHOSPHORUS 3,860 PL PED
 POTASSIUM 22,700 PL PED
 PROTEIN 133,000 PL PED
 RIBOFLAVIN 1.1 PL PED
 SELENIUM 33 PL PED
 SILICON 368 PL PED
 SODIUM 99,170 PL PED
 THIAMIN 1.6 PL PED
 TIN 33 PL PED
 ZEAXANTHIN PL JSG
 ZINC 39 PL PED

RHUS COPALLINA L.

“DWARF SUMAC;
 WINGED SUMAC”

ALUMINUM 18-610 ST USG
 ALUMINUM 40-1,920 LF USG
 ASH 25,000-61,000 ST USG
 ASH 27,000-96,000 LF USG
 BARIUM 8-915 ST USG
 BARIUM 8-672 LF USG
 BORON 1-30 ST USG
 BORON 3-67 LF USG
 CALCIUM 2,450-21,350 ST USG
 CALCIUM 3,240-24,960 LF USG
 CHROMIUM 0.05-1.22 ST USG
 CHROMIUM 0-1.92 LF USG
 COPPER 1.8-30 ST USG
 COPPER 0.8-19 LF USG
 GALLIUM 0-0.48 LF USG
 LANTHANUM 0.7-9.2 ST USG
 LANTHANUM 0.8-29 LF USG
 LEAD 0.2-92 ST USG
 LEAD 0.2-67 LF USG
 MAGNESIUM 375-4,270 ST USG
 MAGNESIUM 405-9,600 LF USG
 MANGANESE 7-915 ST USG
 MANGANESE 8-480 LF USG
 MOLYBDENUM 0-0.5 ST USG
 MOLBDENUM 0-1.44 LF USG
 NEODYMIUM 1.7-18 ST USG
 NEODYMIUM 1.8-28.8 LF USG
 NICKEL 0-6 ST USG

NICKEL 0-6.7 LF USG
 PHOSPHORUS 75-1,464 ST USG
 PHOSPHORUS 243-3,456 LF USG
 POTASSIUM 1,300-20,740 ST USG 1/
 POTASSIUM 2,700-29,760 LF USG
 SCANDIUM 0-0.96
 STRONTIUM 12-427 ST USG
 STRONTIUM 13-288 LF USG
 TITANIUM 0.5-43 ST USG
 TITANIUM 0.5-144 LF USG
 VANADIUM 0.02-1.83 ST USG
 VANADIUM 0.13-4.8 LF USG
 WATER
 YTTERBIUM 0.05-18 ST USG
 YTTERBIUM 0.05-0.67 LF USG
 YTTRIUM 0.125-4.27 ST USG
 YTTRIUM 0.135-14.4 LF USG
 ZINC 7-128 ST USG
 ZINC 5-96 LF USG
 ZIRCONIUM 0.5-9.6 ST USG 1/
 ZIRCONIUM 0.5-14.4 LF USG

RHUS GLABRA* L.*"SMOOTH SUMAC"**

ALUMINUM 2-1,005 ST USG
 ASH 21,000-67,000 ST USG
 BARIUM 1-335 ST USG
 BORON 2-34 ST USG
 CADMIUM 0-4 ST USG
 CALCIUM 2,520-24,790 ST USG
 CALCIUM-MALATE FR HHB
 CHROMIUM 0-10.05 ST USG
 COBALT 0-0.47 ST USG
 COPPER 0.6-20 ST USG
 DIHYDROFisetin LF HHB
 FAT 87,000-120,000 SD HHB
 Fisetin LF HHB
 FLUORINE 0-0.134 ST USG
 GALLIC-ACID-METHYLESTER HHB
 IODINE 3-6 ST USG
 LEAD 0.4-20 ST USG
 MAGNESIUM 147-4,690 ST USG
 MANGANESE 3-134 ST USG
 MOLYBDENUM 0-4.69 ST USG
 NICKEL 0-6.7 ST USG
 PHOSPHORUS 126-2,412 ST USG
 POTASSIUM 1,176-14,740 ST USG
 PROTEIN 100,000 SD HHB
 SELENIUM 0-0.25 ST USG
 SODIUM 2-107 ST USG
 STRONTIUM 4-670 ST USG
 TANNIN 270,000 LF HHB
 TARTARIC-ACID FR(?) HHB

TITANIUM 0.2-100 ST USG
 ZINC 3-208 ST USG
 ZIRCONIUM 0.4-3.4 ST USG

RHUS TOXICODENDRON* L.*"POISON IVY"**

Fisetin PL CRC
 GALLOTANNIC-ACID PL CRC
 GALLOTANNIC-ACID-METHYL-ESTER
 PL CRC
 HENEICOSANDICARBONIC-ACID FR
 KAEMPFEROL PL CRC
 LINOLEIC-ACID SD CRC
 MYRICETIN PL CRC
 MYRISTIC-ACID FR CRC
 OLEIC-ACID SD CRC
 PALMITIC-ACID FR CRC
 QUERCETIN PL CRC
 RHAMNOSE PL CRC
 TANNINS 250,000 PL CRC
 URUSHENOL 33,000 FR CRC
 URUSHENOL 33,000 LF CRC
 URUSHENOL 16,000 ST CRC
 URUSHIOL PL CRC

RHYNCHOSIA MINIMA* DC.*"BURN MOUTH VINE"**

8-C-ARABINOSYLAPIGENIN PL JSG
 ASH 76,900 SH WOI
 CALCIUM 19,200 SH WOI
 CARBOHYDRATES 508,000 SH WOI
 6,8-DI-C-GLUCOSIDE PL JSG
 DI-C-HEXOSYLAPIGENIN PL JSG
 FAT 6,000 SD CRC
 FAT 42,000 SH WOI
 FIBER 236,600 SH WOI
 GALLIC-ACID SD JFM
 6-C-GLUCOSYLAPIGENIN PL JSG
 6-C-GLUCOSYL-8-C-
 XYLOSYLAPIGENIN PL JSG
 C-GLYCOSYL-FLAVONES LF JFM
 6-C-HEXOSYL-8-C-
 PENTOSYLAPIGENIN PL JSG
 HYDROQUINONE-DIACETATE SD
 JFM
 C-PENTOSYL-C-HEXOSYLAPIGENIN PL
 JSG
 PHOSPHORUS 2,400 SH WOI
 PRODELPHINIDIN SD JFM
 PROTEIN 136,000 SH WOI
 PROTEIN 236,000 SD CRC
 PROTOCATECHUIC-ACID SD JFM

RIBES NIGRUM L.
"BLACK CURRANT"

ACETALDEHYDE FR HHB	P-COUMARIC-ACID FR HUL
ACETIC-ACID FR HHB	CYANIDIN PL JLS58:127
ACETONE FR HHB	CYANIDIN-3-DIGLUCOSIDE FR HHB
ALPHA-ALANINE 210 FR JU HUL	CYANIDIN-3-GLUCOSIDE FR HUL
BETA-ALANINE 12 FR JU HUL	CYANIDIN-MONOGLUCOSIDE FR HHB
ALUMINUM 3-65 FR AAS	CYANIDIN-3-RUTINOSIDE FR HUL
ISO-AMYBUTYRATE FR HHB	VIT-P-ACTIVITY HHB
ANTHOCYANINS 10,000-40,000 FR HUL	P-CYMELE FR HHB
ANTHOCYANOSIDES 3,000 FR 411/	P-CYMENOL-(4) FR HHB
ARGININE 35 FR JU HUL	M-CYMOL 3 LF HHB
ARSENIC 0.01-0.06 FR AAS	P-CYMOL 3 LF HHB
ASCORBIC-ACID 1,200-10,030 FR USA	DACTYLIFRIC-ACID FR HUL
411/	DELPHINIDIN PL JLS58:127
ASH 8,050-61,100 FR AAS USA	DELPHINIDIN-3-GLUCOSIDE FR HUL
ASPARAGINE 87 FR JU HUL	DELPHINIDIN-3-DIGLUCOSIDE FR HHB
ASPARTIC-ACID 23 FR JU HUL	DELPHINIDIN-3-RUTINOSIDE FR HUL
BENZALDEHYDE FR HHB	HHB
BORON 1-64 FR AAS BOB	EMULSIN LF HHB
BROMINE <1 FR AAS	EO 7,500 BUD WOI
BUTANOL FR HHB	EO 200 LF HHB WOI
2-BUTANOL FR HHB	ETHANOL FR HHB
2-BUTANONE FR HHB	ETHYL-ACETATE FR HHB
BUTYL-ACETATE FR HHB	ETHYL-BENZOATE FR HHB
BUTYL-FORMIATE FR HHB	ETHYL-BUTYRATE FR HHB
BUTYRALDEHYDE FR HHB	FAT 250,000-305,000 SD ABS WOI
CADMIUM 0.001-0.01 FR AAS	FAT 3,150-27,977 FR USA
CAFFEIC-ACID FR HUL	FERULIC-ACID FR HUL
CALCIUM 502-4,720 FR AAS USA	FIBER 24,000-133,000 FR USA
CALCIUM-PECTATE 9,000-17,000 FR	FLAVONOIDS 4,600 LF HHB
WOI	FLUORINE 0.1-2.8 FR AAS
CAMPHENE FR HHB	FORMALDEHYDE FR HHB
CARBOHYDRATES 153,800-852,050 FR	FORMIC-ACID FR HHB
USA	FRUCTOSE 36,700 FR HUL
CAREN-3 38 LF HHB	(+)-GALLOCATECHIN FR HUL
DELTA-3-CARENE FR HHB	GENTISIC-ACID FR HUL
BETA-CAROTENE 1-8 FR USA	GERANIOL FR HHB
CARYOPHYLLENE 34 LF HHB	GERANIOL 12 LF HHB
CARYOPHYLLENE (11.9%) FR HHB	GLUCOSE 23,500 FR HUL
(+)-CATECHIN 5,500-13,800 FR HUL	GLUTAMIC-ACID 210 FR JU HUL
CHLOROGENIC-ACID FR HUL	GLUTAMINE 290 FR JU HUL
TRANS-CHLOROGENIC-ACID FR HUL	GLYCOLLIC-ACID FR HUL
CHROMIUM 0.01-0.27 FR AAS	HARDWICKIC-ACID FR HHB
1,8-CINEOLE FR HHB	HEXANOL FR HHB
CINNAMIC-ACID FR HUL	CIS-HEX-3-EN-1-OL
CITRIC-ACID 35,000 FR HHB	TRANS-HEX-2-EN-1-OL FR HHB
CITRONELLOL FR HHB	2-HEXENAL FR HHB
CITRONELLYL-ACETATE LF FR HHB	HUMULENE 4 LF HHB
COBALT 0.002-0.027 FR AAS	HUMULENE FR HHB
COPPER 0.6-7 FR AAS USA	INDOLEACETIC-ACID SD HHB
O-COUMARIC-ACID FR HHB	INVERT-SUGARS 60,000-80,000 FR HHB
	IRON 11-108 FR USA
	ISOLEUCINE 28 FR JU HUL
	ISOQUERCITRIN FR HHB
	KAEMPFEROL FR HHB

LEAD 0.04-0.6 FR AAS
 LEUCINE 28 FR JU HUL
 LIMONENE 7 LF HHB
 LIMONENE FR HHB
 LINALOOL 7 LF HHB
 LINOLEIC-ACID 1,070-5,928 FR USA
 ALPHA-LINOLENIC-ACID 720-3,988 FR USA
 GAMMA-LINOLENIC-ACID 47,500-57,950 SD ABS
 LUTEIN 4.4-22 FR JAF37:657
 MAGNESIUM 220-1,720 FR AAS USA
 MANGANESE 0.5-27 FR AAS USA
 MERCURY 0.0004-0.01 FR AAS
 METHANOL FR HHB
 METHYL-BENZOATE FR HHB
 3-METHYL-BUTANOL FR HHB
 2-METHYL-3-BUTEN-2-OL FR HHB
 3-METHYL-2-BUTEN-1-OL FR HHB
 METHYL-BUTYRATE FR HHB
 P-METHYLISOPROPENYLBENZOL FR HHB
 1-METHYL-4-ISOPROPYLBENZOL
 METHYL-N-HEXENOATE FR HHB
 2-METHYL-PROPANOL FR HHB
 METHYL-SALICYLATE LF FR HHB
 MOLYBDENUM 0.1-0.6 FR AAS
 MYRCENE LF FR HHB
 MYRICETIN FR HHB
 NEOCHLOROGENIC-ACID FR HUL
 NIACIN 3-17 FR USA
 NICKEL 0.101 FR AAS
 NITROGEN 1,800-12,775 FR AAS
 NORVALINE 17 FR JU HUL
 BETA-OCIMENE LF HHB
 CIS-BETA-OCIMENE FR HHB
 TRANS-BETA-OCIMENE FR HHB
 OCT-1-EN-3-OL FR HHB
 OCTEN-1-OL-(3) 13 LF HHB
 OLEIC-ACID 560-3,102 FR USA
 OXALIC-ACID 200 FR HUL
 PALMITIC-ACID 200-1,108 FR USA
 PALMITOLEIC-ACID 70-388 FR USA
 PANTOTHENIC-ACID 4-22 FR USA
 PECTIN FR HUL
 PECTINESTERASE FR HUL
 PENTANAL FR HHB
 2-PENTANOL FR HHB
 PENTANOL FR HHB
 1-PENTEN-3-OL FR HHB
 BETA-PHELLANDRENE LF FR HHB
 PHOSPHORUS 490-3,500 FR AAS USA
 ALPHA-PINENE (13%) FR HHB LF HHB
 BETA-PINENE (13%) FR HHB

POTASSIUM 3,100-21,110 FR AAS USA
 PROLINE 98 FR JU HUL
 PROPANOL FR HHB
 PROTEIN 141,700 LF HHB
 PROTEIN 12,000-88,640 FR USA
 PROTOCATECHUIC-ACID FR HUL
 QUERCETIN FR HHB
 QUERCETIN-3-GLUCOSIDE FR HUL
 QUERCITRIN FR HHB
 QUINIC-ACID LF HHB
 RIBOFLAVIN 1-3 FR USA
 RUBIDIUM 1-28 FR AAS
 RUTIN LF FR HHB
 SELENIUM <0.002 FR AAS
 SERINE 60 FR JU HUL
 SILICON 10-220 FR AAS
 SODIUM 20-111 FR USA
 STEARIC-ACID 70-388 FR USA
 STYROL FR HHB
 SUCROSE 6.200 FR HUL
 SUGARS 15,800-106,400 FR HUL
 SULFUR 200-1,385 FR AAS
 SYRINGIC-ACID FR HUL
 TANNINS 85,000 LF HHB
 ALPHA-TERPINENE FR HHB
 TERPINENE FR HHB
 TERPINENOL-(4) LF FR HHB
 TERPINOLENE FR HHB
 ALPHA-TERPINEOL FR HHB
 THIAMIN 1-3 FR USA
 THREONINE 17 FR JU HUL
 ALPHA-TOCOPHEROL 22-120 FR TOT
 VALINE 170 FR JU HUL
 VIT-B6 1-4 FR USA
 WATER 815,220-824,000 FR USA
 ZINC 2-21 FR AAS USA

AAS=ACTA AGRIC SCAND SUPPL
 22:1980 H20=82%; ZMB=5.56 X APB

RIBES RUBRUM L.

"RED CURRANT;
 WHITE CURRANT"

ACETIC-ACID FR HHB
 ALUMINUM 3-100 FR AAS
 ARSENIC 0.01-0.18 FR AAS
 ASCORBIC-ACID 300-2,554 FR USA WOI
 ASH 6,000-75,000 FR AAS USA WOI
 BORIC-ACID FR WOI
 BORON 1-80 FR AAS BOB
 BROMINE <1 FR AAS
 CADMIUM 0.003-0.03 FR AAS
 CALCIUM 298-2,875 FR AAS USA

CARBOHYDRATES 138,000-859,740 FR USA
 BETA-CAROTENE 0.25-4 FR USA
 JAF37:657
 CHLORINE 146-910 FR HUL
 CHROMIUM 0.01-0.125 FR AAS
 CITRIC-ACID 20,200 FR HUL
 COBALT <0.005 FR AAS
 COPPER 0.5-7 FR AAS USA
 CYANIDIN-3-GLUCOSYLROUTINOSIDE FR HUL
 CYANIDIN-3-RUTINOSIDE FR HUL
 CYANIDIN-3-SAMBUBIOSIDE FR HUL
 CYANIDIN-3-SOPHOROSIDE FR HUL
 CYANIDIN-3-XYLOSYLROUTINOSIDE FR HUL
 CYANIN FR HHB
 DELPHINIDIN-3-GLUCOSIDE FR HUL
 FAT 160,000-250,000 SD WOI
 FAT 2,000-12,460 FR USA
 FIBER 34,000-211,820 FR USA
 FLUORINE 0.05-1.8 FR AAS
 FRUCTOSE 19,300 FR HUL
 GLUCOSE 22,800 FR HUL
 HCN LF WOI
 P-HYDROXYBENZOIC-ACID FR HHB
 INDOLEACETIC-ACID SD HHB
 IRON 9-68 FR USA
 ISOCITRIC-ACID FR HUL
 LEAD 0.02-0.5 FR AAS
 LINOLEIC-ACID 530-3,302 FR USA
 ALPHA-LINOLENIC-ACID 350-2,180 FR USA
 LUTEIN 0.47-2.3 FR JAF37:657
 MALIC-ACID 2,600 FR HUL
 MAGNESIUM 122-935 FR AAS USA
 MANGANESE 1-15 FR AAS USA
 MERCURY 0.0003-0.006 FR AAS
 METHYL-SALICYLATE FR WOI
 MOLYBDENUM 0.1-0.6 FR AAS
 NIACIN 1-6 FR USA
 NICKEL 0.03-0.6 FR AAS
 NITROGEN 1,600-20,000 FR AAS
 OLEIC-ACID 280-1,744 FR USA
 OXALIC-ACID FR HHB
 PALMITIC-ACID 100-623 FR USA
 PALMITOLEIC-ACID 10-62 FR USA
 PANTOTHENIC-ACID 1-4 FR USA
 PECTIN 8,000 FR WOI
 PHOSPHORUS 418-3,310 FR AAS USA
 POTASSIUM 2,585-21,250 FR AAS USA
 PROTEIN 14,000-87,220 FR USA
 PROTOPECTIN FR HHB
 RIBOFLAVIN 1-3 FR USA

RUBIDIUM 0.9-23 FR AAS
 SALICYLIC-ACID FR HHB
 SELENIUM <0.002 FR AAS
 SILICON 10-312 FR AAS
 SODIUM 8-72 FR USA
 STEARIC-ACID 30-187 FR USA
 SUCCINIC-ACID FR HHB
 SUCROSE 1,500 FR HUL
 SUGARS 6,000-83,200 FR HUL
 SULFUR 130-1,782 FR AAS HUL
 TARTARIC-ACID FR HHB
 THIAMIN 1-2 FR USA
 ALPHA-TOCOPHEROL 8-59 FR TOT
 VIT-B6 1-4 FR USA
 WATER 834,000-845,000 FR USA
 ZINC 2-16 FR AAS USA

AAS=ACTA AGRIC SCAND SUPPL
 22:1980 H2O=84%; ZMB=6.25 X APB

RIBES UVA-CRISPA L.

"GOOSEBERRY"

ACETIC-ACID FR HHB
 ALUMINUM 1-33 FR AAS
 ARSENIC <0.01 FR AAS
 ASCORBIC-ACID 263-2,397 FR USA
 ASH 4,000-183,000 FR AAS USA
 BORON 1-15 FR AAS
 BROMINE <1 FR AAS
 CADMIUM 0.001-0.04 FR AAS
 CALCIUM 185-4,122 FR CRC USA HUL
 CARBOHYDRATES 101,800-839,239 FR USA
 BETA-CAROTENE 0.6-14 FR USA
 JAF37:657
 (+)-CATECHIN FR HUL
 CHLORINE 107-882 FR HUL
 CHLOROGENIC-ACID FR HUL
 CHROMIUM 0.002-0.08 FR AAS
 CITRIC-ACID 8,800 FR HUL
 COBALT <0.005 FR AAS
 COPPER 0.4-6 FR AAS USA
 P-COUMARIC-ACID FR HUL
 CYANIDIN-3-GLUCOSIDE FR HHB
 CYANIDIN-3-RUTINOSIDE FR HHB
 10,16-DIHYDROXYHEXADECANOIC-ACID FR HUL
 FAT 183,000-200,000 SD ABS HHB
 FAT 5,800-47,815 FR USA
 FERULIC-ACID FR HUL
 FIBER 19,000-156,636 FR USA
 FLUORINE 0.04-0.8 FR AAS
 FORMIC-ACID FR HHB

FRUCTOSE 41,000 FR HUL
 (+)-GALLOLATECHIN
 GLUCOSE 44,000 FR HUL
 GLYOXYLIC-ACID FR HHB
 18-HYDROXYOCTADECANOIC-ACID
 FR HUL
 INDOLEACETIC-ACID SD HHB
 IRON 2.5-40 FR AAS USA
 ISOCITRIC-ACID FR HUL
 LEUCOANTHOCYANIN FR HUL
 LINOLEIC-ACID 2,710-22,341 FR USA
 ALPHA-LINOLENIC-ACID 460-3,792 FR
 USA
 GAMMA-LINOLENIC-ACID SD ABS
 LUTEIN 1.7-9 FR JAF37:657
 MALIC-ACID 7,300 FR HUL
 MAGNESIUM 86-938 FR USA
 MANGANESE 1-16 FR AAS USA
 MERCURY 0.0002-0.017 FR AAS
 MOLYBDENUM <0.1 FR AAS
 NEOCHLOROGENIC-ACID FR HUL
 NIACIN 3-25 FR USA
 NICKEL 0.004-0.4 FR AAS
 NITROGEN 1,100-15,000 FR AAS
 OLEIC-ACID 510-4,204 FR USA
 OXALIC-ACID FR HUL
 PALMITIC-ACID 190-1,566 FR USA
 PANTOTHENIC-ACID 3-24 FR USA
 PECTIN FR HHB
 PHOSPHORUS 150-2,665 FR AAS
 USA
 POTASSIUM 1,150-20,830 FR AAS
 USA
 PROTEIN 7,300-84,913 FR USA
 PROTOPECTIN FR HHB
 QUINIC-ACID FR HHB
 RIBOFLAVIN 0-2 FR USA
 SACCHAROSE 630 FR HHB
 SELENIUM <0.002 FR AAS
 SHIKIMIC-ACID FR HHB
 SILICON 1-42 FR AAS
 SODIUM 10-82 FR USA
 STARCH 15,000 FR HHB
 STEARIC-ACID 130-1,071 FR USA
 SUCROSE 7,100 FR HUL
 SUGARS 19,800-102,500 FR HUL
 SULFUR 96-1,113 FR AAS HUL
 TANNIN FR HHB
 TARTARIC-ACID FR HHB
 THIAMIN 0-3 FR USA
 TOCOPHEROL 7-56 FR TOT
 VIT-B6 1-7 FR USA
 WATER 875,000-882,000 FR USA
 ZINC 1-16 FR AAS USA

AAS=ACTA AGRIC SCAND SUPPL
 22:1980 H20=88%; ZMB=8.33 X APB

RICINUS COMMUNIS L.

“CASTORBEAN”

AGMATINE SD HHB
 ALBUMIN SD HHB
 AMYLASE SD JAD
 BETA-AMYRIN LF RAA
 ASH 124,000 LF JAD
 ASH 20,000-22,000 SD JAD
 CALCIUM 26,700 LF JAD
 CARBOHYDRATES 574,000 LF JAD
 CARBOHYDRATES 31,000-70,000 SD
 JAD
 CASBENE PL JSG
 CATALASE SP JAD
 CHLOROGENIC-ACID PL RAA
 CORILAGIN LF HHB
 P-COUMARIC-ACID LF HHB
 TRANS-DEHYDROMATRICARIAESTER
 RT HHB
 N-DEMETHYLRICININE 80-160 LF
 JNP:155.1985
 6,7-DIHYDROXY-8-METHOXY-COUMA-
 RIN FL CCO
 3,4-DIMETHOXY-6,8-DIHYDROXY-
 COUMARIN FL CCO
 9,10-DIOXYSTEARIC-ACID
 EDESTINE SD HHB
 ELLAGIC-ACID LF HHB
 ENDOTRYPSIN SD JAD
 FAT 54,000 LF JAD
 FAT 430,000-700,000 SD HHB
 FERULIC-ACID LF HHB
 FIBER 103,000 LF JAD
 FIBER 231,000-272,000 LF JAD
 FUCOSE SD HHB
 GALLIC-ACID LF HHB
 GLUTAMIC-ACID SD HHB
 GLYCOLIC-ACID SD JAD
 HCN 7 SD JAD
 N-HEPTYLALDEHYDE SD CCO
 HYPEROSIDE LF JNP:155.1985 FL CCO
 INVERTASE SD JAD
 INVERTSUGAR SD HHB
 ISOQUERCITRIN LF HHB
 KAEMPFEROL PL JLS58:137
 KAEMPFEROL-3-O-BETA-D-
 GLUCOPYRANOSIDE 18 LF
 JNP:155.1985
 KAEMPFEROL-3-O-BETA-RUTINOSIDE
 28 LF JNP:155.1985

KAEMPFEROL-3-O-BETA-D-
 XYLOPYRANOSIDE 7 LF JNP:155.1985
 LECITHIN SD HHB
 LINOLEIC-ACID SD HHB
 LIPASE SD JAD
 30-NORLUPAN-3-BETA-OL-20-ONE PL
 JSG
 MALTASE SD JAD
 MANNOSE SD JAD
 NEOCHLOROGENIC-ACID PL RAA
 NIACIN 13 SD HHB
 L-(+)-NORLEUCINE SD HHB
 NUCLEOALBUMIN SD HHB
 OLEIC-ACID SD HHB
 OXIDASE SD JAD
 PALMITIC-ACID SD HHB
 PEROXIDASE SP JAD
 PHOSPHORUS 4,600 LF JAD
 PROTEIN 248,000 LF JAD
 PROTEIN 120,000-160,000 SD JAD
 QUERCETIN PL JLS58:137
 QUERCITRIN LF HHB
 QUERCETIN-3-O-BETA-D-
 GLUCOPYRANOSIDE 310 LF
 JNP:155.1985
 QUERCETIN-3-O-BETA-RUTINOSIDE 40
 LF JNP:155.1985
 QUERCETIN-3-O-BETA-D-
 XYLOPYRANOSIDE 4 LF JNP:155.1985
 REDUCTASE SP JAD
 RIBOFLAVIN 1 SD HHB
 RIBONUCLEASE SD JAD
 RICIN 3,000 SD HHB
 RICININE 700-5,500 LF JNP:155.1985
 RICINOLEIC-ACID SD JAD
 RICINOLEIC-ACID-ESTERS 43,200-
 48,600 SD RAA
 RUTIN 2,000 LF JNP:155.1985 HHB
 SACCHAROSE SD HHB
 SAPOGENIN-ACETATE ST HHB
 SHIKIMIC-ACID LF HHB
 BETA-SITOSTEROL SD JAD RT HHB
 SQUALENE (380) SD WOI
 STIGMASTEROL LF RAA
 SUCCINIC-ACID SD HHB
 SUGAR 25,000 SD HHB
 TOCOPHEROLS 0-540 SD RAA WOI
 ALPHA-TOCOPHEROL 9 OI TOT
 GAMMA-TOCOPHEROL 459 OI TOT
 TRIDEC-1-EN-PENTA-3,5,7,9,11-IN RT
 HHB
 TRIRICINOLEIN 293,260-477,400 SD
 HHB
 URIC-ACID 60 SD JAD

WATER 51,000-56,000 SD JAD
 ZYMOGEN SD JAD

RIVEA CORYMBOSA HALL. F.

“SNAKEPLANT”

ALKALOIDS 560 SD CRC
 CHANOCLAVINE 40 SD CRC
 1,7-DIMETHYLPHENANTHRENE SD
 CRC
 ELYMOICLAVINE 15 SD CRC
 ERGINE 100 SD CRC
 ERGOMETRINE 20 SD CRC
 ERGOMETRININE 20 SD CRC
 ISOERGINE 190 SD CRC
 LYSERGOL SD CRC
 PENNICLAVINE SD CRC
 PHENANTHRENE SD CRC
 TRYPTOPHAN SD CRC
 TUBICORYNE PL CRC

ROBINIA PSEUDOACACIA L.

“BLACK LOCUST”

ACACETIN LF CRC
 ACACETIN-7-
 XYLOSIDORHAMNOGLUCOSIDE LF
 HHB
 ACACIIN LF HHB
 AMYGDALIN BK CRC
 ANTHRANILIC-ACID-METHYL-ESTER
 FL HHB
 APIGENIN-7-BIOSIDE LF
 CRCAPIGENIN-7-RHAMNOXYLOSIDE
 LF HHB
 APIGENIN-7-TRIOSIDE LF CRC
 ARACHIDIC-ACID 990-4,390 SD CRC
 HHB
 ASH 61,000-75,000 LF WOI
 ASH 40,000-47,000 SD WOI
 ASPARAGINE LF HHB
 BEHENIC-ACID 1 SD CRC HHB
 BENZALDEHYDE FL WOI
 BENZYL-ALCOHOL FL HHB
 BUTEIN WD CRC
 BUTIN WD CRC
 CALCIUM 12,900-15,000 LF WOI
 CALCIUM 19,000 SD WOI
 CANAVANINE SD WOI
 CARBOHYDRATES 350,000-465,000 LF
 WOI
 CARBOHYDRATES 204,000-466,000 SD
 WOI
 CAROTENE 2,090 LF WOI

- ALPHA-CELLULOSE 453,000 WD CRC
 DIHYDROROBINETIN 53,000-176,000
 WD CRC HHB
 2,4-DIHYDROXYBENZOIC-ACID WD
 HHB
 5,7-DIHYDROXY-4'-METHOXYFLAVONE
 LF HHB
 EO 100 LF CRC
 FARNESOL FL HHB
 FAT 30,000-33,000 LF WOI
 FAT 108,000-133,000 SD CRC HHB
 FIBER 172,000-390,000 LF WOI
 FIBER 129,000-136,000 SD WOI
 Fisetin WD CRC
 FUSTIN WD CRC
 3-O-BETA-D-GALACTOFURANOSYL-6-
 BETA-L-RHAMNOFURANOSIDE FL
 HHB
 GLUCOSE LF HHB
 HELIOTROPINE FL WOI
 TRANS-2-HEXENAL LF WOI
 HEXEN-3-OL LF WOI
 HYDROXYMETHYLGLUTAMYL-
 HYDROXYABSCICIC-ACID PL JSG
 INDICAN LF CRC
 INDOLE FL HHB
 KAEMPFEROL FL HHB
 KAEMPFEROL-7-ALPHA-L-
 RHAMNOFURANOSIDE FL HHB
 KAEMPFEROL-7-BETA-L-
 RHAMNOFURANOSIDE FL HHB
 KAEMPFEROL-7-ALPHA-L-
 RHAMNOPYRANOSIDE FL HHB
 KAEMPFEROL-7-BETA-L-
 RHAMNOPYRANOSIDE FL HHB
 LEUCOROBINITINIDINE 62,000 WD
 CRC
 LIGNIN 216,000 WD WOI
 LIGNOCERIC-ACID SD HHB
 LINARIN LF HHB
 LINALOOL FL HHB
 LINOLEIC-ACID 15,900-70,490 SD CRC
 HHB
 LINOLENIC-ACID 3,600-15,960 SD CRC
 HHB
 LIQUIRITIGENIN WD CRC
 METHYL-ANTHRALINATE FL WOI
 NEROL FL HHB
 OLEIC-ACID 7,500-33,250 SD CRC HHB
 PALMITIC-ACID 1,380-6,115 SD CRC
 HHB
 2',4',2,3,4-PENTAHYDROXYCHALCONE
 WD HHB
 PENTOSANS 191,000 WD WOI
 PHASIN BK CRC
 PHOSPHORUS 2,600-3,200 LF WOI
 P2O5 16,500 SD WOI
 PHYTOSTREOLS BK CRC
 PROTEIN 170,000-255,000 LF WOI
 PROTEIN 388,000-432,000 SD CRC WOI
 PYROCATECHIN-TANNINS 20,000-
 70,000 BK HHB
 RAFFINOSE 1 SD WOI
 RESIN BK CRC
 RHAMNOSE LF HHB
 ROBIN 16,000 BK HHB
 ROBINETIN 20,000-80,000 WD CRC HHB
 ROBININ FL HHB
 ROBINITIN 30,000 BK CRC
 ROBTEIN WD CRC
 ROBTIN 15,000 WD CRC
 BETA-SITOSTEROL FL HHB
 STACHYOSE SD WOI
 STEARIC-ACID 700-3,125 SD CRC HHB
 SYRINGIN BK CRC
 TANNIN 70,000 BK CRC
 TANNINS 33,000-70,000 WD WOI
 TAXIFOLIN 40,000 WD CRC
 ALPHA-TERPINEOL FL HHB
 2',4',4'-TRIHYDROXYCHALCONE WD
 HHB
 7,3',4'-TRIHYDROXYFLAVAN-3,4-DIOL
 WD CRC
 UREASE BK CRC
 WATER 103,000-115,000 SD WOI
 XANTHONE WD CRC
 XYLOSE LF HHB
-
- RORIPPA ISLANDICA* (OEDER)
 BORBAS
 "MARSHCRESS"
 RORIFONE
-
- ROSA CANINA* L.
 "ROSE"
 D-ABSCISSIN FR HHB
 ACETIC-ACID SD HHB
 ALUMINUM 5-12 FR AAS
 ASCORBIC-ACID 7,400-25,000 FR HHB
 JEL PED
 ASH 22,000 SD HHB
 ASH 24,000-60,000 FR AAS JEL
 BETULIN FR HHB
 BORON 8-22 FR AAS
 BROMINE 2-5 FR AAS

CADMIUM 0.03-0.075 FR AAS
 CALCIUM 3,500-8,750 FR AAS
 CAPRIC-ACID FR HHB
 CARBOHYDRATES 387,600-779,000 FR JEL PED
 BETA-CAROTENE 25-62 FR HHB
 CATECHIN FR PED
 CATECHIN-TANNINS 15,000 RT HHB
 CHLORINE 313 FR JEL
 CHROMIUM 0.03-0.07 (-18) FR AAS (PED)
 CITRIC-ACID 15,000 FR HHB
 COBALT 0.01-0.025 FR AAS
 COPPER 1.8-36 FR AAS JEL
 EO 2,000-3,000 SD HHB
 EPICATECHIN FR HHB
 FAT 17,000-26,000 FR HHB
 FAT 80,000-108,000 SD CRC HHB
 FIBER 300,000 FR PED
 FLAVONOIDS 100-3,500 FR PED
 FLUORINE 0.6-1.5 FR AAS
 FRUCTOSE FR PED
 GALLOCATECHIN FR HHB
 GLUCOSE FR PED
 HISTONE LF HHB
 INVERT-SUGARS 100,000-137,000 FR HHB
 IRON 5-13 FR AAS
 ISOQUERCITRIN FR HHB
 KAEMPFEROL-3
 (P-COUMAROYLGLUCOSIDE) FR HHB
 KAEMPFEROL-3-GLUCOSIDE FR HHB
 KILOCALORIES 1,839-3,410 FR JEL PED
 LEAD 0.16-0.4 FR AAS
 LECITHIN SD HHB
 LEUCOANTHOCYANINS FR PED
 LEUCOPAENIDIN FR HHB
 LEUCOROSINIDIN FR HHB
 LINOLEIC-ACID 43,200-58,320 SD HHB
 LINOLENIC-ACID 25,600-34,560 SD HHB
 LYCOPENE FR HHB
 MAGNESIUM 560-2,090 FR AAS JEL
 MALIC-ACID 15,000-62,200 FR JEL PED
 MANGANESE 12-40 FR AAS PED
 MERCURY <0.001 FR AAS
 MOLYBDENUM <0.1 FR AAS
 NIACIN 3-68 FR HHB PED
 NICKEL 0.4-1 FR AAS
 NITROGEN 3,600-9,000 FR AAS
 PECTIN 110,000 FR HHB
 PHOSPHORUS 560-5,180 FR AAS JELPED
 POTASSIUM 5,843-21,000 FR AAS JEL PED

PROTEIN 72,300-133,000 FR JEL PED
 PROTEIN 88,000-114,000 SD CRC HHB
 PYROGALLOTANNINS 15,000 RT HHB
 RIBOFLAVIN 7.2 FR PED
 RUBIDIUM 10-25 FR AAS
 RUBIXANTHIN FR HHB
 SELENIUM 0.002-0.005 (-21) FR AAS (PED)
 SILICON 10-25 FR AAS
 SODIUM 2,930-4,600 FR JEL PED
 SUCCINIC-ACID FR HHB
 SUCROSE 6,000-32,100 FR JEL HHB
 SUGARS 116,000-156,000 FR HHB
 SULFUR 400-1,000 FR AAS
 TANNIN 20,000-27,000 FR HHB PED
 TANNINS 100,000-260,000 LF HHB
 TARAXAXANTHIN FR HHB
 THIAMIN 3.8 FR PED
 TIN 22 FR PED
 ALPHA-TOCOPHEROL 41-204 FR TOT
 TOCOPHEROLS 660 SD HHB
 TRITERPENES 5,200 RT HHB
 VANILLIN FR HHB
 WATER 502,000-913,000 FR AAS JEL PED
 XANTHOPHYLL FR HHB
 ZEAXANTHIN FR HHB
 ZINC 9-23 FR AAS

AAS=ACTA AGRIC SCAND SUPPL
 22:1980. FOR ROSA SPP; H₂O=60%;
 ZMB= 2.5 X APB

ROSA CENTIFOLIA L.

"CABBAGE ROSE"

CITRAL EO HHB
 CITRONELLOL 1,200 EO AYL HHB
 CYANIN FL HHB
 EO 2,000 FL HHB
 EUGENOL EO AYL
 GALLIC-ACID FL HHB
 GERANIC-ACID EO AYL
 GERANIOL EO AYL
 GERANIOL-ALDEHYDE EO HHB
 L-LINALOOL EO HHB
 MALIC-ACID FL HHB
 METHIONINE-SULFOXIDE FL WOI
 MYRCENE EO AYL
 NEROL EO AYL
 PECTIN FL HHB
 BETA-PHENETHYL-ALCOHOL EO AYL
 ALPHA-PINENE EO AYL
 BETA-PINENE EO AYL

QUERCITRIN FL HHB
 RESIN FL HHB
 SAPONIN 13,000 FL WOI
 SAPONIN 85,000 LF WOI
 SHISONIN-A FL HHB
 STEAROPTENES 300-460 EO AYL HHB
 SUGAR FL HHB
 TANNINS 100,000-240,000 FL HHB
 TARTARIC-ACID FL HHB
 WAX FL HHB

ROSA DAMASCENA MILLER

"DAMASK ROSE"

BENZALDEHYDE 0.01-0.1% EO BML
 CAMPHENE 0.005-0.07% EO BML 1/
 CAROTENE 7-8 PO WOI 2/
 CARVONE 0.28-0.43% EO BML 1/
 CHLOROGENIC-ACID 15,000 PO
 WOI 2/
 CINNAMALDEHYDE 0.10-0.25% EO
 BML 1/
 CITRONELLOL 28.20-45.04% EO BML
 CITRONELLYL-ACETATE 0.51-0.72% EO
 BML
 DAMASCENONE PL JSG
 TRANS-BETA-DAMASCENONE 0.5-0.6%
 EO BML 1/
 CYANIN FL WOI
 DECANAL 0.48-0.86% EO BML 1/
 EO 250-500 FL WOI
 ETHANOL 1.43-5.14% EO BML
 EUGENOL 0.50-0.60% EO BML 1/
 TRANS-TRANS-FARNESOL 0.36-1.61%
 EO BML
 GERANIAL 0.28-0.43% EO BML
 GERANIOL 5.94-13.16% EO BML 1/
 GERANYL-ACETATE 1.10-1.60% EO
 BML
 GERANYL-PROPIONATE EO BML
 GERMACRENE-D EO BML
 HEPTANAL 0.005-0.07% EO BML 1/
 HEPTANOL 0.01-0.02% EO BML
 HEXANOL 0.15-0.25% EO BML 1/
 3-HEXENAL 0.08-0.26% EO BML
 HEXYL-ACETATE 0.01% EO BML
 KAEMPFEROL PL JSG
 KAEMPFEROL-3-O-BETA-
 GALACTOPYRANOSIDE PL JSG
 KAEMPFEROL-3-O-BETA-
 GLUCOPYRANOSIDE PL JSG
 LIMONENE EO BML
 LINALOOL 0.54-2.18% EO BML

LYCOPENE FR WOI
 METHYL-EUGENOL 0.71-1.63% EO
 BML 1/
 METHYL-HEPTENONE 0.02-0.04% EO
 BML
 MYRCENE 0.15-0.25% EO BML 1/
 NERAL 5.94-13.16% EO BML 1/
 NEROL 3.60-6.62% EO BML
 NEROL-OXIDE EO BML
 NERYL-ACETATE 0.04-0.09% EO
 BML
 NONANOL 0.03-0.21% EO BML 1/
 OCTANAL 0.02-0.05% EO BML
 OCTANOL 0.01-0.07% EO BML
 OLEFIN-C-17 0.90-1.22% EO BML 1/
 OLEFIN-C-18 0.12-0.33% EO BML 1/
 OLEFIN-C-19 6.53-8.08% EO BML 1/
 OLEFIN-C-20 0.42-0.53% EO BML 1/
 OLEFIN-C-21 1.65-2.14% EO BML 1/
 PARAFFIN-C-15 0.10-0.33% EO BML
 PARAFFIN-C-16 0.71-1.63% EO BML 1/
 PARAFFIN-C-17 0.90-1.22% EO BML 1/
 PARAFFIN-C-19 6.53-8.08% EO BML 1/
 PARAFFIN-C-20 0.42-0.53% EO BML 1/
 PARAFFIN-C-21 1.65-2.14% EO BML 1/
 PARAFFIN-C-22 0.10-0.46% EO BML
 PARAFFIN-C-23 0.49-0.90% EO BML
 PARAFFIN-C-24 0.03-0.04% EO BML
 PARAFFIN-C-25 0.02-0.07% EO BML
 PECTOLINARIGENIN PL JSG
 PENTANAL 0.05-0.07% EO BML
 PHENETHYLALCOHOL 0.48-0.86% EO
 BML 1/
 BETA-PHENETHYLAMINE PL JSG
 ALPHA-PINENE 0.04-0.73% EO BML
 BETA-PINENE 0.02-0.03% EO BML
 PROLINE PO WOI 1/
 QUERCETIN FL WOI
 QUERCITRIN FL WOI
 CIS-ROSE-OXIDE 0.05-0.21% EO
 BML
 TRANS-ROSE-OXIDE 0.07-0.18% EO
 BML
 RUBIXANTHIN FR WOI
 BETA-SITOSTEROL PL JSG
 TARAXANTHIN FR WOI
 TERPINEN-4-OL 0.48-0.86% EO
 BML 1/
 XANTHOPHYLL FR WOI
 ZEAXANTHIN FR WOI

1/ When two compounds are lumped, I split
 the difference. 2/po=pollen

ROSA GALLICA L.

"FRENCH ROSE"

ASCORBIC-ACID 5,450-8,470 FR WOI
 BETA-CAROTENE 16-17 FL WOI
 (-16,700 FL HHB)
 CITRAL FL WOI
 CITRONELLOL FL WOI
 L-CITRONELLOL 40-130 FL WOI
 CYANIN FL HHB
 EO 270-360 FL WOI
 EUGENOL 2-4 FL WOI
 FARNESOL FL WOI
 GALLIC-ACID FL HHB
 GALLICOSIDES FL RAA
 GERANIC-ACID EO AYL
 GERANIOL 100-275 FL WOI
 GERANIOL-ALDEHYDE EO HHB
 INOSITOL FL RAA
 L-LINALOOL FL WOI
 MALIC-ACID FL HHB
 METHIONINE-SULFOXIDE FL WOI
 MYRCENE EO AYL
 NEROL 15-36 FL WOI
 NONYL-ALDEHYDE FL WOI
 PECTIN FL HHB
 PHENYL-ETHYL-ALCOHOL 8-32 FL
 WOI
 ALPHA-PINENE EO AYL
 BETA-PINENE EO AYL
 QUERCITRIN FL HHB
 RESIN FL HHB
 ROSATANNIC-ACID 100,000-240,000 FL
 WOI
 SAPONIN 13,000 FL WOI
 SAPONIN 85,000 LF WOI
 SHISONIN-A FL HHB
 BETA-SITOSTEROL FL RAA
 STEAROPTENES 40-105 FL WOI
 SUGAR 30,000-140,000 FL WOI
 TANNINS 100,000-240,000 FL WOI
 TARTARIC-ACID FL HHB
 WAX FL HHB

ROSA LAEVIGATA MICHX.

"CHEROKEE ROSE"

ARSENIC 0.17 FR CAL
 CALCIUM 7,620 FR CAL
 CITRIC-ACID FR CCO
 COPPER 8-9 FR CAL
 IRON 40 FR CAL

MAGNESIUM 2,830 FR CAL
 MALIC-ACID FR CCO
 MANGANESE 59 FR CAL
 POTASSIUM 13,000 FR CAL
 SAPONIN FR CCO
 SODIUM 73 FR CAL
 TANNIN FR CCO
 ZINC 15 FR CAL

ROSA MULTIFLORA THUNB. EX
MURRAY

"MULTIFLORA ROSE"

AFZELIN FR CCO
 ASCORBIC-ACID 2,000 LF WOI
 ASTRAGALIN FL WOI
 CAMPESTEROL FR CCO
 CAROTENE 814 FR WOI
 D-CATECHIN LF HHB
 CHOLESTEROL FR CCO
 2ALPHA,18ALPHA-
 DIHYDROXYURSOLIC-ACID RT HHB
 2ALPHA,19ALPHA-
 DIHYDROXYURSOLIC-ACID-
 (28-10-BETA-D-GLUCO...RT RAA
 6,7-DIMETHYLAESCULETIN FR CCO
 FAT 80,000 SD HHB
 GALLIC-ACID FR CCO
 GLYCOSIDE-F PL JSG
 KAEMPFEROL-3-GLUCOSIDE LF HHB
 METHYL-GALLATE FR CCO
 MULTIFLORIN FL WOI LAXATIVE
 MULTIFLORIN-A FR CCO
 MULTIFLORIN-B FR CCO
 MULTINOSIDE-B FR CCO
 QUERCITRIN FR CCO
 3-RHAMNOGLUCOSYLKAEMPFEROL
 FR CCO
 ROSAMULTIN PL JSG
 RUTIN FR CCO
 SALICYLIC-ACID FR CCO
 SCOPARONE FR CCO
 BETA-SITOSTEROL PL JSG
 5ALPHA-STIGMASTAN-3,6-DIONE FR
 CCO
 TORMENTIC-ACID RT CCO

ROSA RUBIGINOSA L.

"ROSA MOSQUETA"

ASCORBIC-ACID 12,500 SD 1/
 BETA-CAROTENE PL HHB

P-CAROTENE PL HHB
 CAROTENOIDS 500 SD 1/
 CATECHINS 9,100 SD 1/
 GLYCOSIDES 170,000 SD 1/
 FLAVONOIDS 3,500 SD 1/
 LEUCOANTHOCYANINS
 17,500 SD 1/
 LINOLEIC-ACID 41% SD OIL 1/
 LINOLENIC-ACID 39% SD OIL 1/
 LYCOPENE PL HHB
 OLEIC-ACID 16% SD OIL 1/
 PALMITIC-ACID 3% SD OIL 1/
 PECTIN 46,000 SD 1/
 POLYPHENOLS 26,400 SD 1/
 RUBIXANTHIN PL HHB
 STEARIC-ACID 0.8% SD OIL 1/
 TARAXANTHIN PL HHB
 O-VANILLIN 1,000 PL HHB
 ZEAXANTHIN PL HHB

1/Most seed data taken from A. Hampton's
 Natural Organic Hair and Skin Care(1987).
 Except for the fatty acid and glycoside
 data, numbers resemble high ranges
 presented by AYL for rose hips, not seeds.

ROSA SPP

"ROSE HIPs"

ASCORBIC-ACID 1,000-12,500 FR AYL
 HHB
 CAROTENOIDS 100-500 FR AYL
 CATECHINS 8,000-9,100 FR AYL
 CITRIC-ACID FR AYL
 FLAVONOIDS 100-3,500 FR AYL
 LEUCOANTHOCYANINS 13,500-17,500
 FR AYL
 FRUCTOSE FR AYL
 GLUCOSE FR AYL
 ISOQUERCITRIN FR HHB
 MALIC-ACID FR AYL
 PECTINS 34,000-46,000 FR AYL
 POLYPHENOLS 20,200-26,400 FR
 AYL
 QUERCETIN FR HHB
 RIBOFLAVIN FR AYL
 SUCROSE FR AYL
 TILIROSIDE FR HHB

(MUCH HHB DATA UNDER HIS ROSA
 RUGOSA BUT MAY NOT IN FACT
 APPLY TO THAT LARGE- FRUITED
 SPECIES; FATTY ACIDS CALCULATED
 ASSUMING SD=100,000 FAT)

ROSMARINUS OFFICINALIS L.

"ROSEMARY"

ACETIC-ACID RE NAP
 ALPHA-AMORPHENE 70-665 PL BML
 ALPHA-AMYRIN PL CRC
 BETA-AMYRIN PL CRC
 TRANS-ANETHOLE PL CRC
 APIGENIN PL HHB
 APIGENIN-7-GLUCOSIDE PL HHB
 ASCORBIC-ACID 612-673 PL USA
 ASH 61,900-75,570 PL USA
 BENZYL-ALCOHOL 7-32 PL BML
 BETULINIC-ACID LF NAP
 BETULIN PL HHB
 CIS-ALPHA-BISABOLENE 4-19 PL BML
 BORNEOL 70-4,237 PL BML JAD NAP
 BORNYL-ACETATE 28-5,054 PL BML
 JAD NAP
 BORNYLENE
 BORON 22-39 PL BOB
 BUTAN-2-OL RE NAP
 CADALENE PL BML
 DELTA-CADINENE PL CRC
 GAMMA-CADINENE PL CRC
 CAFFEIC-ACID PL AYL
 CALACORENE PL BML
 CALAMENENE 1-5 PL BML
 CALCIUM 10,919-16,150 PL USA
 CAMPHENE 105-2,350 PL BML JAD
 JEO3:11 PT59:465
 CAMPHOR 60-5,800 PL JAD JEO3:11
 PT59:465
 CAPROIC-ACID RE NAP
 CARBOHYDRATES 640,600-704,660 PL
 USA
 DELTA-3-CARENE 56-206 PL BML
 DELTA-4-CARENE LF NAP
 CARNOSIC-ACID PL AYL
 CARNOSOL 530-9,803 LF NAP
 BETA-CAROTENE 19-21
 CARVACROL
 TRANS-CARVEOL 1-5 PL BML
 CARVONE 16-760 PL
 CARYOPHYLLENE 16-340 PL BML
 BETA-CARYOPHYLLENE 70-2,075 SH
 JEO3:1
 CARYOPHYLLENE-OXIDE PL CRC
 CHLOROGENIC-ACID
 CINEOLE 168-9,728 PL JAD NAP
 1,8-CINEOLE 435-8,125 PL BML JAD
 JEO3:11
 CIRSIMARITRIN 16 SH NAP

- CIRSILION
 ALPHA-COPAENE RE NAP
 COPPER 5-6 PL USA
 CUBENENE PL BML
 AR-CURCUMENE 8-38 PL
 P-CYMENE 25-950 PL BML JAD JEO3:11
 P-CYMEN-8-OL 1-5 PL BML
 DECA-TRANS-2,TRANS-4-DIEN-1-AL RE NAP
 DIMETHYL-STYRENE 4-19 PL BML
 DIOSMETIN PL
 DIOSMIN LF NAP
 DIPENTENE EO NAP
 BETA-ELEMENE 3-200 SH JEO3:11
 ELEMOL 7-32 PL BML
 EO 3,300-25,000 PL BML HHB JEO3:11
 EPI-ALPHA-AMYRIN PL MPC
 EPIROSMANOL 26 LF NAP
 ERIODICTIOL PL HHB
 ETHANOL PL BML
 7-ETHOXY-ROSMANOL LF NAP
 GAMMA-EUDESOL 7-32 PL BML
 FAT 134,020-187,418 PL USA
 ALPHA-FENCHENE PL NAP
 BETA-FENCHENE PL
 ALPHA-FENCHOL TR LF NAP
 FENCHONE 250 PL
 ALPHA-FENCHYL-ACETATE 20-95 PL BML
 ALPHA-FENCHYL-ALCOHOL 28-133 PL BML
 FIBER 165,420-206,338 PL USA
 GENKWANIN LF NAP
 GENKWANIN-4'-METHYL-ETHER PL CRC
 GERANIOL PL PAS
 GLYCOLIC-ACID PL
 HEPTAN-1-AL RE NAP
 HEPTANOIC-ACID RE NAP
 HEPTAN-2-OL RE NAP
 HEPT-TRANS-2-EN-1-AL RE NAP
 HEXAN-1-AL RE NAP
 HEXAN-1-OL RE NAP
 3-HEXANONE 74-351 PL BML
 HISPIDULIN PL 411/
 HISPIDULOSIDE PL NAP
 ALPHA-HUMULENE 6-725 SH JEO3:11
 HUMULENE-EPOXIDE-I PL CRC
 HUMULENE-EPOXIDE-II PL CRC
 HYDROXYBENZOIC-ACID-4-BETA-D-GLUCOSIDE LF NAP
 4-HYDROXYBENZOYL-GLUCOSIDE LF NAP
 5-HYDROXY-4',7-DIMETHOXYFLAVONE PL MPC
 ALPHA-HYDROXYHYDROCAFFEIC-ACID PL MPC
 2-BETA-HYDROXYOLEANOLIC-ACID PL HHB
 3-BETA-HYDROXYUREA-12,20(30)-DIEN-17-ON-ACID PL HHB
 19-ALPHA-HYDROXYURSOLIC-ACID PL HHB
 IRON 220-400 PL
 ISOBORNEOL 7-95 PL BML
 ISOBORNYL-ACETATE PL JFM
 ISOBUTYL-ACETATE PL 411/
 ISOPINOCARVEOL 4-19 PL BML
 ISOPULEGOL 4-19 PL BML
 ISOROSMANOL 17 FL NAP
 ISOROSMARICINE PL AYL
 LABIATIC-ACID PL AYL
 LAVANDULOL 7-34 PL BML
 LEDENE PL CRC
 LIMONENE 40-1,950 PL BML JAD JEO3:11
 (+)-LIMONENE 16-76 PL JAD NAP
 LINALOOL 16-375 PL JAD JEO3:11
 LINALOOL-ACETATE 32-152 PL JAD NAP
 LONGIFOLENE 20-95 PL BML
 LUTEOLIN PL 411/
 LUTEOLIN-7-GLUCOSIDE PL
 MAGNESIUM 2,142-2,483 PL USA
 MANGANESE 18-19 PL USA
 P-MENTH-CIS-2-EN-1-OL TR LF NAP
 P-MENTH-TRANS-2-EN-1-OL TR LF NAP
 P-MENTH-3-EN-1-OL 28-133 PL BML
 MESITY-ALCOHOL 40-190 PL BML
 6-METHOXY-GENKWANIN PL CRC
 6-METHOXYLUTEOLIN PL CRC
 6-METHOXYLUTEOLIN-7-GLUCOSIDE PL CRC
 6-METHOXYLUTEOLIN-7-METHYL-ETHER PL CRC
 7-METHOXY-ROSMANOL 18 SH NAP
 3-METHYL-BUTAN-1-OL RE NAP
 METHYL-ETHER PL CRC
 METHYL-EUGENOL PL CRC
 METHYL-HEPTENONE 8-38 PL BML
 N-METHYL-ROSMARICINE PL JSG
 MONOMETHYL-ALKANE LF HHB
 ALPHA-MUROLENE PL
 GAMMA-MUROLENE 70-665 PL BML
 MYRCENE 25-5,605 PL BML JAD NAP JEO3:11
 MYRTENOL 8-38 PL BML

- NEOCHLOROGENIC-ACID PL AYL
 NEPETIN PL NAP
 NEPETRIN PL PAS
 NIACIN 10-11 PL USA
 NONAN-2-ONE RE NAP
 NOPOL 1-5 PL BML (?)
 BETA-OCIMENE RE NAP
 TRANS-OCIMENE 4-130 PL BML
 OCTANE-2,3-DIONE RE NAP
 OCTANOIC-ACID RE NAP
 OCTAN-1-OL RE NAP
 3-OCTANOL 4-19 PL BML
 3-OCTANONE 20-40 PL NAP
 1-OCTEN-3-OL PL NAP
 OLEANOLIC-ACID 10,500 PL HHB
 PECTIN SH NAP
 PENTAN-1-AL RE NAP
 PENTAN-1-OL RE NAP
 PENTAN-2-OL RE NAP
 ALPHA-PHELLANDRENE 4-133 PL BML
 JAD NAP
 BETA-PHELLANDRENE TR PL BML
 JAD NAP
 PHOSPHORUS 490-1,000 PL USA
 PHYTOSTEROLS 580-640 PL USA
 PICROSALVIN PL MPC
 ALPHA-PINENE 235-4,750 PL BML JAD
 NAP JEO3:11
 BETA-PINENE 50-1,425 PL BML JAD
 NAP JEO3:11
 POTASSIUM 8,842-11,284 PL USA
 PRISTANE LF HHB
 PROTEIN 40,700-62,568 PL USA
 PROTOCATECHUIC-ACID-4-BETA-D-
 GLUCOSIDE LF NAP
 ROSMADIAL 30 LF NAP
 ROSMADIOL PL JSG
 ROSMANOL 92 LF NAP
 ROSMARIC-ACID 3,000-3,500 PL ABS
 ROSMARICINE PL AYL
 ROSMARIDIPHENOL PL PAS
 ROSMARINIC-ACID 3,500 LF NAP
 ROSMARINIC-ACID 13,500 SH NAP
 ROSMARINIC-ACID 38,957 TC NAP
 ROSMARINIC-ACID 25,000 PL
 FT62:166
 ROSMARINOL PL JSG
 ROSMARIQUINONE PL PAS
 SABINENE TR-190 PL BML JAD NAP
 CIS-SABINENE-HYDRATE TR PL BML
 JAD NAP
 TRANS-SABINENE-HYDRATE TR-19 PL
 BML JAD NAP
 SAFROLE 32-95 PL
- SALICYLIC-ACID-2-BETA-D-GLU-
 COSIDE LF NAP
 SALVIGENIN PL
 SANTENE
 ALPHA-SELINENE PL CRC
 SINENSETIN PL 411/
 BETA-SITOSTEROL PL MPC
 SODIUM 462-592 PL
 SQUALENE PL
 STYRENE RE NAP
 SYRINGIC-ACID-4-BETA-D-GLUCOSIDE
 LF NAP
 TANNIN PL CRC
 TERPINEN-4-OL 4-521 PL JAD NAP
 ALPHA-TERPINENE 5-100 PL BML JAD
 JEO3:11
 GAMMA-TERPINENE 4-400 PL BML
 JAD JEO3:11
 ALPHA-TERPINEOL 24-1,500 PL BML
 JEO3:11
 CIS-BETA-TERPINEOL 20-95 PL BML (?)
 DELTA-TERPINEOL 7-418 PL BML JAD
 NAP
 TRANS-BETA-TERPINEOL 7-34 PL
 BML(?)
 TERPINOLENE 12-350 PL BML JAD
 JEO3:11
 THIAMIN 5-6 PL USA
 ALPHA-THUJENE 1-475 PL JAD JEO3:11
 ALPHA-THUJONE 84-399 PL
 BETA-THUJONE 44-209 PL
 THYMOL PL
 TOLUENE 436-2,071 PL BML
 TRICYCLEN TR PL JAD NAP
 TRIMETHYLALKANE LF HHB
 3,5,5-TRIMETHYLHEXAN-1-OL 28-133
 PL BML(?)
 O-O-N-TRIMETHYLROSMARICINE PL
 URSOLIC-ACID 28,000-41,000 PL HHB
 VANILLIC-ACID-4-BETA-D-GLUCOSIDE
 LF NAP
 VERBENOL PL
 VERBENONE 10-375 PL BML JAD
 JEO3:11
 WATER 77,900-108,300 PL USA
 ZINC 30-38 PL USA
 ZINGIBERENE RE NAP
-
- RUBIA CORDIFOLIA* L.
 “MADDER”
 1-ACETOXY-6-HYDROXY-2-
 METHYLANTHRAQUINONE-3-O-
 ALPHA-RHAMNOSYL...

ALIZARIN RT CCO
 ANTHRAQUINONES RT CCO
 ARSENIC 1.10 RT CAL
 CALCIUM 37,800 RT CAL
 COPPER 15 RT CAL
 1,4-DIHYDROXY-2-
 CARBOETHOXYANTHRAQUINONE
 PL JSG
 1,4-DIHYDROXY-2-
 METHYLANTHRAQUINONE RT CCO
 1,5-DIHYDROXY-2-
 METHYLANTHRAQUINONE RT CCO
 5,8-DIHYDROXY-2-
 METHYLANTHRAQUINONE RT CCO
 1,4-DIHYDROXY-2-METHYL-5-
 METHOXYANTHRAQUINONE RT CCO
 1,3-DIMETHOXY-2-
 CARBOXYANTHRAQUINONE RT CCO
 HEXAPEPTIDES PL JSG
 1-HYDROXY-2-CARBOXY-3-
 METHOXYANTHRAQUINONE PL JSG
 1-HYDROXY-2-
 METHOXYANTHRAQUINONE RT CCO
 1-HYDROXY-2-METHYL-ANTHRAQUI-
 NONE PL CCO
 1-HYDROXY-2-METHYL-6-
 METHOXYANTHRAQUINONE PL JSG
 1-HYDROXY-2-METHYL-7-
 METHOXYANTHRAQUINONE PL JSG
 IRON 720 RT CAL
 MAGNESIUM 1,870 RT CAL
 MANGANESE 94 RT CAL
 MUNJISTINE RT CCO
 NOR-DAMNACANTHAL PL CCO
 OLEANOLIC-ACID-ACETATE PL JSG
 PHYSCION PL CCO
 POTASSIUM 12,600 RT CAL
 PSEUDOPURPURIN RT CCO
 PURPURIN RT CCO
 PURPUROXANTHINS PL CCO
 RUBIADIN RT CCO
 RUBICOUMARIC-ACID PL CCO
 RUBIFOLIC-ACID PL CCO
 SCOPOLETOL PL JSG
 BETA-SITOSTEROL PL JSG
 SODIUM 195 RT CAL
 XANTHOPURPURIN RT CCO
 ZINC 39 RT CAL

RUBUS CHAMAEMORUS L

“CLOUDBERRY”

ALUMINUM 1-25 FR AAS
 ARSENIC <0.01 FR AAS

ASH 4,100-31,250 FR AAS
 BORON 1.6-12 FR AAS
 BROMINE <1 FR AAS
 CADMIUM 0.05-0.38 FR AAS
 CALCIUM 150-1,125 FR AAS
 CHROMIUM 0.01-0.38 FR AAS
 COBALT 0.003-0.125 FR AAS
 COPPER 0.7-5.6 FR AAS
 FLUORINE 0.3-1.9 FR AAS
 IRON 7-47 FR AAS
 LEAD 0.1-1 FR AAS
 MAGNESIUM 270-1,875 FR AAS
 MANGANESE 7-125 FR AAS
 MERCURY 0.001-0.006 FR AAS
 MOLYBDENUM 0.1-0.6 FR AAS
 NICKEL 0.2-1.25 FR AAS
 NITROGEN 2,400-18,125 FR AAS
 PHOSPHORUS 320-2,500 FR AAS
 POTASSIUM 1,500-11,875 FR AAS
 RUBIDIUM 3-38 FR AAS
 SELENIUM <0.002 FR AAS
 SILICON 10-62 FR AAS
 SULFUR 190-1,185 FR AAS
 WATER 840,000 FR AAS
 ZINC 5.3-40 FR AAS

AAS=ACTA AGRIC SCAND SUPPL
 22:1980 H2O= 84%; ZMB = 6.25 X APB

RUBUS CHINGII HU

“CHINESE RASPBERRY”

ARSENIC 0.14 FR CAL
 CALCIUM 7,490 FR CAL
 CITRIC-ACID FR CCO
 COPPER 12 FR CAL
 FRUCTOSE FR CCO
 GLUCOSE FR CCO
 IRON 110 FR CAL
 MAGNESIUM 2,740 FR CAL
 MALIC-ACID FR CCO
 MANGANESE 287 FR CAL
 MERCURY 0.03 FR CAL
 POTASSIUM 12,500 FR CAL
 RUBUSOSIDE LF CCO
 SODIUM 97 FR CAL
 TARTARIC-ACID FR CCO
 ZINC 28 FR CAL

RUBUS FRUTICOSUS

“BLACKBERRY”

BETA-AMYRIN LF PL HHB
 ARBUTIN LF HHB

ASCORBIC-ACID LF HHB
 BORON 0.1-21 FR BOB
 CHLOROGENIC-ACID FR CRC(FNS)
 FERULIC-ACID FR CRC(FNS)
 HYDROQUINONE LF HHB
 2-HYDROXYURSOLIC-ACID PL HHB
 INOSITOL LF HHB
 LACTIC-ACID LF HHB
 MALIC-ACID LF HHB
 NEOCHLOROGENIC-ACID FR CRC(FNS)
 OXALIC-ACID LF HHB
 RUBINIC-ACID PL JSG
 RUBITIC-ACID PL JSG
 SITOSTEROL PL HHB
 STIGMASTEROL PL HHB
 SUCCINIC-ACID LF HHB
 TANNIN LF HHB
 URSOLIC-ACID PL HHB

RUBUS IDAEUS L.

“RED RASPBERRY”

ACETIC-ACID
 ACETOIN FR HHB
 ALUMINUM 392 LF PED
 ASCORBIC-ACID 3,670 LF PED
 ASCORBIC-ACID 300 SD HHB
 ASH 80,000 LF PED
 BENZALDEHYDE
 BENZOIC-ACID
 BORON 1-13 FR BOB
 BUTYRIC-ACID FR HHB
 CAFFEIC-ACID FR
 CALCIUM 12,100 LF PED
 CAPRONIC-ACID FR
 CAPRYLIC-ACID FR
 CARBOHYDRATES 790,000 LF PED
 ALPHA-CAROTENE 0.13-0.6 FR
 JAF37:657
 BETA-CAROTENE 0.06-0.3 FR JAF37:657
 BETA-CAROTENE 114 LF PED
 CHROMIUM 13 LF PED
 CINNAMYL-ALCOHOL
 COBALT 34 LF PED
 P-CRESOL
 CYANIDIN-3-GLUCOSYLROUTINOSIDE
 CYANIDIN-3-GLUCOSIDE
 CYANIDIN-3-ROUTINOSIDE
 CYANIDIN-3-SOPHOROSIDE
 CYANIDIN-5-MONOGLYCOSIDE
 CYANIN FR HHB
 DAMASCENE
 DEXTROSE 35,000 FR HHB
 DIACETYL FR HHB

DIHYDRO-BETA-IONONE HHB
 ELLAGIC-ACID LF
 EPOXY-BETA-IONONE
 ETHANOL
 ETHYL-ACETATE
 P-ETHYL-PHENOL
 FARNESOL
 FAT 17,000 LF PED
 FAT 145,000-240,000 SD
 FERULIC-ACID FR HHB
 FIBER 82,000 LF PED
 FORMIC-ACID FR
 ALPHA-FURANCARBONIC-ACID
 FURFURAL FR HHB
 GALLIC-ACID LF
 GERANIOL FR
 HEXEN-2-ACID FR
 HEXEN-3-ACID FR
 CIS-HEXEN-3-OL
 2-HEXEN-4-OLIDE
 P-HYDROXYPHENYLETHYLALCOHOL
 BETA-IONONE
 IRON 1,010 LF PED
 ISOAMYL-ALCOHOL FR HHB
 ISOBUTYRIC-ACID FR HHB
 ISOVALERIANIC-ACID FR HHB
 KAEMPFEROL-3-BETA-GLUCURONIDE
 KILOCALORIES 2,750 LF PED
 LACTIC-ACID LF
 LEVULOSE 35,000 FR HHB
 LUTEIN 0.76-4 FR JAF37:657
 MAGNESIUM 3,190 LF PED
 MALIC-ACID FR HHB
 MALTOL FR HHB
 MANGANESE 16-18 FR
 MANGANESE 146 LF PED
 3-METHYL-2-BUTEN-1-OL
 5-METHYL-FURFURAL FR HHB
 NIACIN 382 LF PED
 ORGANIC-ACIDS 15,000-20,000
 OXYBENZOIC-ACID FR HHB
 PECTIN 14,500 FR HHB
 PELARGONIN-3,5-DIGLYCOSIDE FR
 HHB
 PELARGONIN-3,2-
 GLUCOSYLROUTINOSIDE FR HHB
 1-PENTANOL FR HHB
 1-PENTEN-3-OL
 TRANS-2-PHENYLBUTANONE
 BETA-PHENYLETHYLALCOHOL FR
 HHB
 PHOSPHORUS 2,340 LF PED
 O-PHTHALIC-ACID FFR HHB
 POTASSIUM 13,400 LF PED

PROPIONIC-ACID FR HHB
 PROTEIN 113,000 LF PED
 QUERCETIN-3-BETA-GLUCURONIDE
 RIBOFLAVIN TR LF PED
 SALICYLIC-ACID FR HHB
 SELENIUM 25 LF PED
 SILICON 13 LF PED
 SODIUM 77 LF PED
 SUCCINIC-ACID LF FR HHB
 TANNIN 6,200 FR HHB
 TANNIN 100,000-120,000 LF PED
 THEASPIRANE
 THIAMIN 3.4 LF PED
 ALPHA-TOCOPHEROL 9-56 FR TOT
 VALERIANIC-ACID FR HHB
 WATER 831,000 LF PED
 ZINC TR LF PED

RUMEX ACETOSA L.

"GARDEN SORREL"

ANTHRACENE RH WBB
 ASCORBIC-ACID 630-12,400 LF WBB
 WOI
 ASH 11,000-110,000 LF WOI
 CALCIUM 430-4,300 LF WOI
 CARBOHYDRATES 26,000-560,000 LF
 USA WOI
 BETA-CAROTENE 77-1,100 LF USA
 WOI
 CHRYSOPHANIN RT WOI
 CHRYSOPHANIC-ACID RT WOI
 CHRYSOPHANOL PL JSG
 CHRYSOPHANOL-ANTHRONE PL
 JSG
 COPPER 3-30 LF WOI
 EMODIN PL JSG
 FAT 47,000 FR WOI
 FAT 3,000-50,000 LF WOI USA
 FIBER 8,000-80,000 LF USA
 HYPERIN 370 LF WOI
 HYPEROSIDE 500 LF WBB
 IODINE 0.07-2 LF WOI
 IRON 16-160 LF USA
 ALPHA-LINOLENIC-ACID 435-4,350 LF
 PCO
 MAGNESIUM 460-4,600 LF WOI
 MANGANESE 6-60 LF WOI
 NIACIN 5-50 LF USA
 OXALIC-ACID 3,000 LF WOI
 OXYMETHYLANTHRAQUINONE 10,500
 RH WBB
 PHOSPHORUS 410-4,400 LF USA WOI
 PHYSCION PL JSG

POTASSIUM 3,380-40,000 LF WOI
 POTASSIUM-BINOXYLATE 10,000-
 13,600? LF WBB WOI
 PROTEIN 26,000-260,000 LF WOI
 QUERCETIN FR WOI
 RIBOFLAVIN 2.2-22 LF USA
 RUTIN 12,800 LF WOI
 SODIUM 50-500 LF USA
 TANNINS 50,000 FR WOI
 TANNINS 27,800-226,600 RT WBB WOI
 TARTARIC-ACID LF WOI
 THIAMIN 0.8-9 LF USA WOI
 VITEXIN LF WOI
 WATER 900,000 LF WOI
 ZINC 2-20 LF WOI

RUMEX ACETOSELLA L.

"SHEEP SORREL"

ADENOSINE PL ABS
 ANTHRAQUINONES PL HHB
 ASCORBIC-ACID 500-12,000 LF WOI
 ASH 81,000 SH WOI
 AUXIN PL ABS
 CALCIUM-OXALATE PL HHB
 CALCIUM-OXIDE 16,200 SH WOI
 CATECHIN-TANNIN PL ABS
 CHALCONES PL ABS
 CHRYSOPHANIC-ACID RT HHB
 CHRYSOPHANOL PL 411/
 COUMARINS PL ABS
 CYTOKININ PL ABS
 EMODIN RT WOI
 FAT 17,000-36,000 SD C
 FLOROGLUCOTANNOID PL ABS
 GIBBERELIN PL ABS
 HYPERIN 120 SH WOI
 ISOPENTENYL-ADENINE PL ABS
 MAGNESIUM-OXIDES 10,850 SH
 WOI
 OXALIC-ACID PL HHB
 PHOSPHORUS-OXIDES 11,260 SH
 WOI
 PHYSCION PL 411/
 POTASSIUM-OXALATE PL HHB
 POTASSIUM-BINOXYLATE PL ABS
 POTASSIUM-OXIDES 22,925 SH WOI
 PROTEIN 56,000-96,000 SD CRC
 RUTIN 5,300 SH WOI
 SILICON-OXIDES 9,315 SH WOI
 TANNIN 80,000-140,000 RT HHB
 TARTARIC-ACID PL WBB
 ZEATIN PL ABS
 ZEATIN-RIBOSIDE PL ABS

RUMEX CRISPUS L.

“YELLOW DOCK; CURLY DOCK”
 “LENGUA DE VACA”

ALUMINUM 390 RT PED
 ANTHRAQUINONE GLYCOSIDES
 30,000-40,000 RT 411/
 ASCORBIC-ACID 300-4,054 LF WOI
 ASH 15,000-202,703 LF WOI
 ASH 153,000 RT PED
 AVICULARIN LF HHB 2/
 CALCIUM 740-10,000 LF WOI
 CALCIUM 10,000 RT PED
 CALCIUM-ACETATE LF HHB 2/
 CALCIUM-MALEATE LF HHB 2/
 CARBOHYDRATES 41,000-554,000 LF
 WOI
 CARBOHYDRATES 554,000 RT PED
 BETA-CAROTENE 10.38-140 LF WOI
 BETA-CAROTENE 225 RT PED
 CHROMIUM 0 RT PED
 CHRYSOPHANEIN RT HHB
 CHRYSOPHANIC-ACID RT PED
 CHRYSOPHANIN RT 411/
 COBALT 35 RT PED
 1,8-DIHYDROXY-3-METHYL-9-
 ANTHRONE RT HHB
 EMODIN RT PED
 ERUCIC-ACID RT HHB
 FAT 3,000-40,540 LF WOI
 FAT 41,000 RT PED
 FIBER 9,000-121,612 LF WOI
 FIBER 122,000 RT PED
 GALACTOSE LF HHB 2/
 GLUCOSE LF HHB 2/
 HYPEROSIDE LF HHB 2/
 IRON 760 RT PED
 KILOCALORIES 210-2,840 SH PAN
 LAPATINIC-ACID RT HHB
 MAGNESIUM 3,200 RT PED
 MANGANESE 145 RT PED
 NEPODIN RT 411/
 NIACIN 4-54 LF WOI
 NIACIN 54 RT PED
 OXALIC-ACID RT PED
 OXYMETHYLANTHRAQUINONE RT
 HHB
 PHOSPHORUS 560-7,568 LF WOI
 PHOSPHORUS 7,570 RT PED
 PHYSCION RT HHB
 POTASSIUM 12,200 RT PED
 PROTEIN 15,000-202,703 LF WOI
 PROTEIN 203,000 RT PED

QUERCETIN LF HHB 2/
 QUERCITRIN LF HHB 2/
 RHEOCHRYSSIN RT HHB
 RIBOFLAVIN 0.8-10.8 LF WOI
 RIBOFLAVIN 10.8 RT PED
 RUMICIN PL WOI
 RUTIN LF HHB 2/
 SELENIUM 25 RT PED
 SILICON 13 RT PED
 SODIUM 77 RT PED
 TANNIN 30,000-60,000 RT HHB
 THIAMIN 0.6-8.1 LF WOI
 THIAMIN 8.1 RT PED
 TIN 24 RT PED
 WATER 926,000 LF HHB
 WATER 743,000 RT PED
 ZINC TR RT PED

2/May apply to *R. obtusifolius* rather than *R. crispus*. HHB.

RUMEX HYMENOSEPALUS TORR

“CANAGRE”

CHRYSOPHANIC-ACID 12,000 PL CRC
 LEUCOCYANIDIN RT CRC
 LEUCODELPHINIDIN RT CRC
 LEUCOPELARGONIDIN RT CRC
 PHYSCION-EMODIN 3,000 PL CRC
 RESIN PL CRC
 STARCH 250,000-400,000 PL CRC
 SUGAR 80,000-120,000 PL CRC
 TANNIN 180,000-350,000 PL CRC

RUSCUS ACULEATUS L.

“BUTCHER’S BROOM”

ALUMINUM 1,310 RT PED 1/
 ASCORBIC-ACID 21 RT PED
 ASH 63,000 RT PED
 CALCIUM 7,250 RT PED
 BETA-CAROTENE 0.15 RT PED
 CHROMIUM 25 RT PED
 CHRYSOPHANIC-ACID PL PED
 COBALT 128 RT PED
 DEGLYCORUSCOSIDE PL JSG
 EO 1,000-3,000 PL PED
 EURAPONE PL PED
 FAT 20,000 RT PED
 FIBER 108,000 RT PED
 GLYCOLIC-ACID RT HHB
 IRON 1,640 RT PED
 KILOCALORIES 2,950 RT PED
 MAGNESIUM 2,340 RT PED

MANGANESE 70 RT PED
 MUCILAGE 100,000-150,000 PL PED
 NEORUSCOGENIN RT HHB
 NIACIN 81 RT PED
 PHOSPHORUS 1,670 RT PED
 POTASSIUM 9,340 RT PED
 PROTEIN 84,000 RT PED
 RESIN RT HHB
 RIBOFLAVIN 14 RT PED
 RUSCIN PL PED
 RUSCODIBENZOFURAN PL JSG
 RUSCOGENIN PL PED
 RUSCONIN PL JSG
 RUSCOSIDE PL PED
 RUTIN 300-400 PL PED
 SAPONIN 4,000-4,600 PL PED
 SELENIUM 24 RT PED
 SILICON 280 RT PED
 SODIUM 0.5 RT PED
 SUCROSE 36,000 RT HHB
 THIAMIN 8.3 RT PED
 TIN 21 RT PED
 WATER 698,000 PL PED
 ZINC TR BK PED

RUTA GRAVEOLENS L.

“RUE”

ANISIC-ACID PL AYL
 ARBORININE PL AYL
 ASCORBIC-ACID 4,790 LF WOI
 BERGAPTEN PL AYL
 BYAKANGELICIN PL HHB
 CAROTENE 944 LF WOI
 CERYL-ALCOHOL SD WOI
 CHALEPENSIN RT HHB
 CINEOLE PL AYL
 DAPHNORETIN RT HHB
 DAPHNORETIN-METHYL-ETHER RT
 HHB
 2-DECANONE EO AYL
 2-DECYL-ALCOHOL LF HHB
 DICTAMNINE PL HHB
 3-(1',1'-DIMETHYLALLYL)-
 DAPHNETINDIMETHYLETHER RT
 HHB
 3-(1',1'-DIMETHYLALLYL)-8-(3',3'-
 DIMETHYLALLYL)-XANTHYLETIN
 3-(1',1'-DIMETHYLALLYL)-HERNIARIN
 RT HHB
 1-(4',4'-DIMETHYLHEXEN-5'-YL)-3,4-
 METHYLENEDIOXYBENZOL RT H
 2-N-DODECYL-1,4-QUINOLONE RT CCO
 EMODIC-ACID LF HHB

EO 600-7,000 LF HHB
 ERYTHROBUTAN-2,3-DIOL
 ETHYL-VALERATE EO WOI
 GAMMA-FAGARINE PL AYL
 FAT 370,000 SD HHB
 FURACRIDONE PL JSG
 GEIGERINE PL HHB
 GRAVACRIDOCHLORINE PL HHB
 GRAVACRIDINOLCHLORINE PL HHB
 GRAVACRIDONEDIOL PL HHB
 GRAVACRIDONEDIOL-O-BETA-D-
 GLUCOSIDE PL JSG
 GRAVACRIDONEDIOL-O-METHYL-
 ETHER PL JSG
 GRAVACRIDONETRIOL PL JSG
 GRAVELLIFERONE RT HHB
 GRAVELLIFERONE-METHYL-ETHER
 RT HHB
 GRAVEOLINE PL AYL
 GRAVEOLINIC-ACID LF HHB
 GRAVEOLININE PL AYL
 GUAIACOL PL AYL
 HELIOXANTHIN PL 411/
 2-HEPTANOL PL 411/
 2-HEPTANONE PL AYL
 HERNIARIN PL AYL
 1-HYDROXY-3-METHOXY-N-
 METHYLACRIDONE PL 411/
 ISOBUTYRIC-ACID LF HHB
 ISOIMPERATOPIN PL AYL
 ISOPIMPINELLIN PL HHB
 ISOPROPYLDIHYDROXYFURO-
 QUINOLINE LF HHB
 ISORUTARIN PL JSG
 ISOVALERIC-ACID LF HHB
 KOKUSAGININE PL AYL
 LIMONENE PL AYL
 LINOLEIC-ACID (44.5%) SD HHB
 LINOLENIC-ACID SD HHB
 MALIC-ACID LF HHB
 MARMESINE RT HHB
 MARMESININE RT HHB
 6-METHOXYDICTAMNINE PL AYL
 8-METHOXYGRAVELLIFERONE RT
 HHB
 METHYL-ANTHRALINATE EO WOI
 METHYLBUTYRIC-ACID LF HHB
 2-(4-(3,4-METHYLENEDIOXYPHENYL)-
 BUTYL)-4-QUINOLINE LF HHB
 METHYL-HEPTYL-KETONE EO WOI
 METHYL-N-HEPTYL-CARBINOL EO
 WOI
 METHYL-N-NONYL-KETONE (88%EO)
 PL CCO

METHYL-N-NONYL-CARBINOL EO
 WOI
 1-METHYL-2-N-NONYL-4-QUINOLONE
 PL CCO
 N-METHYLPLATYDESMINIUM LF HHB
 METHYL-SALICYLATE EO WOI
 NAPTHOHERNIARIN PL 411/
 2-NONANOL PL AYL
 2-NONANONE PL AYL
 2-NONYL-ALCOHOL LF HHB
 2-OCTANONE PL AYL
 OLEIC-ACID (22.0% OIL) SD WOI
 PALMITIC-ACID (21.8% OIL) SD WOI
 PANGELIN PL AYL
 PHENOL PL AYL
 PHOLIOSIDINE LF HHB
 ALPHA-PINENE PL AYL
 BETA-PINENE PL AYL
 PREGEUJERENE PL HHB
 PROPIONIC-ACID LG HHB
 PSORALEN PL 411/
 QUERCETIN PL 411/
 RIBALINIDINE LF HHB
 RIBALINIUM LF HHB
 RUTACRIDINE PL 411/
 RUTACRIDONE PL AYL
 RUTACULTIN RT HHB
 RUTALINIUM LF HHB
 RUTAMARIN PL AYL
 RUTAMARIN-ALCOHOL RT HHB
 RUTAMINE LF HHB
 RUTARETIN PL JSG
 RUTARIN 9,000 LF HHB
 RUTIN 20,000 PL AYL
 SAVININE PL HHB
 SCOPOLETIN PL 411/
 SITOSTEROL SD WOI
 SKIMMIANINE PL AYL
 STEARIC-ACID (9.1% OIL) SD WOI
 SUBERENONE PL JSG
 TAIWANIN-C PL HHB
 2-N-TETRADECYL-4-QUINOLONE RT
 CCO
 2-N-TRIDECYL-4-QUINOLONE RT
 CCO
 UMBELLIFERONE PL 411
 2-UNDECANOL PL AYL
 2-UNDECANONE 630-6,300 PL AYL
 411/
 2-UNDECYLALCOHOL LF HHB
 2-N-UNDECYL-4-QUINOLONE RT
 CCO
 UNDECYL-2-ACETATE PL AYL
 XANTHOTOXIN PL AYL

SALIX ALBA L.

“WHITE WILLOW”

ALBOSIDE BK PED
 ALUMINUM 67 BK PED
 APIGENIN BK PED
 ARABINOSE WD HHB
 ASCORBIC-ACID 68 BK PED
 ASH 110,000 BK PED
 ASH 8,700 WD WOI
 CALCIUM 14,100 BK PED
 CARBOHYDRATES 789,000 BK PED
 BETA-CAROTENE TR BK PED
 CATECHIN PL 411/
 CATECHIN-TANNINS 30,000-100,000 BK
 HHB
 CELLULOSE BK PED
 ALPHA-CELLULOSE 444,000 WD WOI
 CHROMIUM 0 BK PED
 COBALT 98 BK PED
 P-COUMARIC-ACID PL 411/
 CYANIDIN LF WOI
 CYANIDIN-3-GLUCOSIDE BK HHB
 FAT 5,000 BK PED
 FIBER 94,000 BK PED
 FRAGILIN BK HHB
 GALACTOSE WD HHB
 GLUCOMANNAN BK PED
 GLUCOSE WD HHB
 GRANDIDENTATUM LF HHB
 HEMICELLULOSE WD HHB
 HOLOCELLULOSE 752,000 WD WOI
 5-HYDROXY-PIPECOLIC-ACID LF HHB
 IRON 210 BK PED
 ISOQUERCITRIN BK PED
 KILOCALORIES 2,820 BK PED
 LIGNIN 255,000 WD WOI
 MAGNESIUM 5,600 BK PED
 MANGANESE 66 BK PED
 4-O-METHYL-GLUCURONOXLAN WD
 HHB
 NIACIN 99 BK PED
 PENTOSANS 205,000 WD WOI
 PHOSPHORUS 4,100 BK PED
 PICEIN PL 411/
 POTASSIUM 9,830 BK PED
 PROTEIN 96,000 BK PED
 QUERCETIN BK PED
 QUERCIMERITRIN BK PED
 RESIN BK WOI
 RHAMNOSE WD HHB
 RIBOFLAVIN 1.7 BK PED
 RUTIN BK PED

SALICASE BK WOI
 SALICIN 25,000-110,000 BK PED
 SALICIN LF HHB
 SALICORTIN LF HHB
 SALICYL-ALCOHOL PL 411/
 SALICYLIC-ACOD PL 411/
 SALIDROSIDE LF HHB
 SALIREPOSIDE BK WOI
 SELENIUM 11 BK PED
 SILICON 29 BK PED
 SODIUM 120 BK PED
 STARCH BK PED
 TANNIN 50,000-70,000 (-120,000) BK
 WOI PED
 THIAMIN 0 BK PED
 TIN 12 BK PED
 TRIANDRIN PL 411/
 VIMALIN LF HHB
 WATER 832,000 BK PED
 XYLOSE WD HHB
 ZINC 21 BK PED

***SALVIA DIVINORUM* EPL. AND
JATIVA**

“SEER SAGE”

SALVINORIN PL JSG

***SALVIA MILTIORRHIZA* BUNGE**

“RED SAGE; TAN-SHEN;
DAN-SHEN”

ARSENIC 0.34 RT CAL
 CALCIUM 2,780 RT CAL
 COPPER 8 RT CAL
 CRYPTOTANSHINONE RT CCO
 DASHENSPIROKETALLACTONE PL
 JSG
 HYDROXYTANSHINONE RT CCO
 IRON 230 RT CAL
 ISOCRYPTOTANSHINONE RT CCO
 ISOTANSHINONE-I RT CCO
 ISOTANSHINONE-II RT CCO
 ISOTANSHINONE-III PL JSG
 MAGNESIUM 3,230 RT CAL
 MANGANESE 23 RT CAL
 METHYL-TANSHINONATE RT CCO
 METHYL-TANSHINONE RT CCO
 MILTIRONE RT CCO
 POTASSIUM 11,700 RT CAL
 SALVIOL RT CCO
 SODIUM 70 RT CAL
 TANSHINOLACTONE PL JSG

TANSHINONE-I RT CCO
 TANSHINONE-II RT CCO
 TANSHINONE-IIA RT CCO
 TANSHINONE-IIIB PL JSG
 TANSHINONIC-ACID PL JSG
 ZINC 12 RT CAL

***SALVIA OFFICINALIS* L.**

“SAGE”

ACETO-HYDROXY-ROYLEANONE PL
 NAP
 ALANINE PL PAS
 ALLOAROMADENDRENE 15-84 LF BML
 ALUMINUM 115 LF PED
 2-AMINO-ADIPIC-ACID 1.6 SH NAP
 ALPHA-AMYRIN
 ALPHA-AMYRIN 1,800 LF NAP
 BETA-AMYRIN
 BETA-AMYRIN 1,000 LF NAP
 APIGENIN PL PAS
 APIGENIN-7-O-BETA-D-
 GLUCURONYLPYRANOSIDE PL NAP
 AROMADENDRENE
 ASCORBIC-ACID 320-350 LF FNF PED
 ASH 87,000 LF PED
 ASPARAGINE
 AVENASTEROL FR NAP
 BETULIN 15 LF NAP
 BORNEOL TR-7,000 SH BML JAD NAP
 BORNYL-ACETATE 5-1,780 SH BML
 JAD NAP
 BORON 25-41 LF BOB
 GAMMA-CADINENE 2-14
 DELTA-CADINENE 2-14
 CAFFEIC-ACID SH NAP
 CALAMENE 5-28
 CALCIUM 10,800-17,957 LF FNF PED
 CAMPESTEROL FR NAP
 CAMPHENE 20-18,592 LF BML JAD NAP
 CAMPHOR 0-9,324 LF BML JAD NAP
 CARBOHYDRATES 660,000 LF PED
 3-CARENE
 CARNOSIC-ACID LF NAP
 CARNOSOL LF PED
 CARNOSOL PL PAS
 CARNOSOLIC-ACID 2,100 LF NAP
 BETA-CAROTENE 35-38 LF FNF PED
 CARYOPHYLLENE 1-1,430 LF BML
 BETA-CARYOPHYLLENE 500-760 LF
 BML
 CARYOPHYLLENE-OXIDE 55-308 BML
 CATECHIN
 ALPHA-CEDRENE PL PAS

- CHLOROGENIC-ACID SH NAP
 CHOLESTEROL FR NAP
 CHROMIUM 3 LF PED
 CHRYSOERIOLOL PL PAS
 CINAROSIDE SH NAP
 CINEOLE 500-6,075 SH JAD NAP
 1,8-CINEOLE 390-6,288 BML JAD NAP
 1,8-CINEOLE-SYNTHETASE LF NAP
 CIRSILINEOL PL PAS
 CIRSILION BML
 CIRSIMARITRIN PL PAS
 CITRAL PL PAS
 COBALT TR LF PED
 BETA-COPAENE HHB
 COPPER 7-8 LF USA
 ALPHA-COROCALENE
 P-COUMARIC-ACID PL PAS
 P-CYMENE 15-495 SH BML JAD NAP
 P-CYMENTH-8-OL
 2-ALPHA,3-ALPHA-DIHYDROXY-
 OLEAN-12-EN-28-OIC-ACID LF NAP
 DIOSMETIN PL PAS
 DIPENTENE-O-DIPHENOLLACTONE
 3,500 LF HHB
 EO 5,000-28,000 BML GEO NAP
 EPIOLEANOLIC-ACID 20 LF NAP
 3-EPIOLEANOLIC-ACID 1.4 LF NAP
 FARNESOL
 FAT 138,000 LF PED
 FAT 250,000 SD
 FERULIC-ACID PL PAS
 FIBER 87,000 LF PED
 FUMARIC-ACID
 GALLIC-ACID PL PAS
 GENKWANIN LF PED
 GERANIOL PL PAS
 GERMANICOL
 GLUTAMINE
 GLYCINE PL PAS
 ALPHA-GURJUNENE
 TRANS-3-HEXENAL
 HISPIDULIN LF BML PED
 ALPHA-HUMULENE 110-616 LF BML
 2-ALPHA-HYDROXY-3-OXO-OLEAN-12-
 EN-28-OIC-ACID 1.2-17 LF NAP
 IRON 150-305 LF CRC PED
 ISOBORNEOL 0-784 SH JAD NAP
 ISOBORNEOL-ACETATE 168-9,436 SH
 JAD NAP
 ISOCARYOPHYLLENE
 3-ISOTHUJONE LF NAP
 KILOCALORIES 3,420 LF PED
 LABIATIC-ACID LF PED
 LEDENE
 LIMONENE 39-2,380 PL BML JAD NAP
 LINALOOL 0-3,500 PL BML JAD NAP
 LINALYL-ACETATE 0-6,048 PL BML
 JAD NAP
 LINOLEIC-ACID 73,000 SD HHB WOI
 LINOLENIC-ACID 42,000-86,750 SD HHB
 WOI
 LUTEOLIN SH NAP
 LUTEOLIN-7-GLUCOSIDE PL NAP
 LUTEOLIN-7-O-BETA-D-GLUCOSIDE PL
 PAS
 LUTEOLIN-7-O-GLUCURONIDE PL
 JSG
 LUTEOLIN-7-GLYCOSIDE PL NAP
 LUTEOLIN-7-METHYL-ETHER
 GAMMA-MAALIENE
 MAGNESIUM 2,830 LF PED
 MALIC-ACID
 MANGANESE 30-31 LF PED USA
 MASLINIC-ACID 46 LF NAP
 6-METHOXYGENKWANIN
 6-METHOXYGENKWANIN-7-METHYL-
 ETHER
 6-METHOXYLUTEOLIN PL NAP
 6-METHOXYLUTEOLIN-7-METHYL-
 ETHER
 5-METHOXYSAUVAGENIN LF NAP
 METHYL-ISOVALERATE 7-42
 2-METHYL-3-METHYLENE-5-HEPTANE
 50-280 LF BML
 2-METHYL-3-METHYLENE-HEPT-CIS-5-
 ENE 40-224 LF JAD NAP
 2-METHYL-3-METHYLENE-HEPT-
 TRANS-5-ENE 5-28 LF JAD NAP
 MYRCENE 0-336 PL BML JAD NAP
 NEPETIN
 NIACIN 57-62 LF FNF PED
 NICOTINIC-ACID-AMIDE 5,000
 TRANS-OCIMENE
 TRANS-ALLO-OCIMENE
 1-OCTEN-3-OL
 OLEANOLIC-ACID 140-786 LF NAP
 OLEANOLIC-ACID 400 ST NAP
 ALPHA-OLEANOLIC-ACID
 BETA-OLEANOLIC-ACID
 OLEIC-ACID 35,500 SD HHB WOI
 OXALIC-ACID
 PALMITIC-ACID SD NAP
 PANTOTHENIC-ACID PL PAS
 PECTIN SH NAP
 PECTOLINAMARIGENIN PL PAS
 PHELLANDRENE 100-560 LF JAD
 NAP
 ALPHA-PHELLANDRENE TR LF NAP

BETA-PHELLANDRENE 5-28 LF JAD
 NAP
 PHOSPHORUS 910-1,280 LF FNF PED
 PICROSALVIN LF PED
 PINENE 420-2,352 LF JAD NAP
 ALPHA-PINENE 7-1,540 PL BML JAD
 NAP
 BETA-PINENE 20-1,540 PL BML JAD
 NAP
 PLANTEOSE SD NAP
 POMOLIC-ACID 2.4-3 LF NAP
 POTASSIUM 24,700 LF PED
 POTASSIUM 10,700-11,630 PL CRC
 POTASSIUM-NITRATE
 PRISTANE 56 LF NAP
 PROTEIN 115,000 LF PED
 PROTEIN 180,000 SD
 RESIN 50,000-60,000
 RIBOFLAVIN 3-4 LF FNF
 ROSMANOL PL PAS
 ROSMANOL-9-ETHYL-ETHER PL
 JA068:731
 ROSMARINIC-ACID 2,000-5,800 SH JAD
 NAP
 ROSMARINIC-ACID 30,000 PL FT62:166
 ROYLEANONE 20,300 RT NAP
 SABINENE 10-56 LF JAD NAP
 CIS-SABINENE-HYDRATE TR LF JAD
 NAP
 TRANS-SABINENE-HYDRATE 10-56 LF
 JAD NAP
 SABINOL 85-476 LF BML
 TRANS-SABINOL TR LF NAP
 SABINYL-ACETATE 110-616
 SACCHAROPINE 1.6 SH NAP
 SALICYLIC-ACID PL PAS
 SALVIATANNIN LF PED
 SALVIGENIN LF PED
 SALVIGENIN-7-O-GLUCURONIDE PL
 JSG
 SALVIN PL JSG
 SALVIN-MONOMETHYL-ETHER LF
 NAP
 SALVIOL EO NAP
 SAPONIN
 SELENIUM TR LF PED
 SELINA-5,11-DIENE
 SERINE PL PAS
 SILICON 31 LF PED
 BETA-SITOSTEROL 5-2,450 LF NAP
 BETA-SITOSTEROL 1,214 ST NAP
 BETA-SITOSTEROL-D-GLUCOSIDE SD
 SODIUM 1,080 LF PED
 SODIUM 11-12 PL FNF

STEARIC-ACID SD NAP
 STIGMASTEROL 5 LF NAP
 TANNIN 20,000-80,000
 TERPINEN-4-OL 10-1,120 LF BML JAD
 NAP
 ALPHA-TERPINENE 10-56 LF BML JAD
 NAP
 GAMMA-TERPINENE 15-140 LF BML
 JAD NAP
 TERPINEOL LF NAP
 ALPHA-TERPINEOL 5-910 LF BML NAP
 CIS-BETA-TERPINEOL 10-56 LF NAP
 DELTA-TERPINEOL TR NAP
 TERPINOLENE TR-112 BML JAD NAP
 THIAMIN 7-8 LF FNF
 ALPHA-THUJENE 0-386 LF JAD NAP
 THUJONE 1,453-12,636 LF JAD NAP
 ALPHA-THUJONE 200-10,172 LF BML
 JAD NAP
 BETA-THUJONE 200-9,968 LF BML JAD
 NAP
 (-)-THUJONE 2,500-13,000 HHB
 THYMOL EO NAP
 TIN 8 LF PED
 N-TRIACONTANE
 TRICYCLEN 15-84 LF JAD NAP
 TYROSINE PL PAS
 URS-12-EN-28-OIC-ACID 14 LF NAP
 URSOLIC-ACID 1,255-1,300 LF NAP
 URSOLIC-ACID 200 ST NAP
 ALPHA-URSOLIC-ACID
 BETA-URSOLIC-ACID
 UVAOL
 VANILLIC-ACID PL PAS
 VIRIDIFLOROL LF NAP
 WATER 843,000 LF PED 1/
 WAX
 ZINC 59 LF PED

SALVIA SCLAREA L.

"CLARY SAGE"

ACETIC-ACID-ESTER PL CRC
 CIS-ALLOOCIMENE PL AYL
 TRANS-ALLOOCIMENE PL AYL
 ARACHIDIC-ACID PL CRC
 BEHENIC-ACID PL CRC
 BENZALDEHYDE PL AYL
 ALPHA-BISABOLOL PL RIZ
 BUTYRIC-ACID PL AYL
 CADINENE PL CRC
 CAMPHENE PL BML
 CAMPHOR PL RIZ
 CAPRYLIC-ACID 2,926 PL CRC

DELTA-3-CARENE PL CRC
 BETA-CARYOPHYLLENE 1-30 PL
 FFJ6:153
 CARYOPHYLLENE-OXIDE PL BML
 CEROTINIC-ACID PL CRC
 1,8-CINEOLE PL RIZ
 CITRAL 75-920 PL FFJ6:154
 CITRONELLOL PL BML
 CUMINALDEHYDE PL AYL
 P-CYMENTHENE 1-27 PL FFJ6:154
 EO 400-5,000 AYL FFJ6:154
 (2R,5E)-EPOXYCARYOPHYLL-5-EN-12-
 AL PL JSG
 (2S,5E)-EPOXYCARYOPHYLL-5-EN-12-
 AL PL JSG
 (2R,5E)-EPOXYCARYOPHYLL-5-ENE PL
 JSG
 (1R,5R)-EPOXYSALVIAL-4(14)-EN-1-ONE
 PL JSG
 FAT 318,000 SD CRC
 FURFUROL PL BML
 GERANIAL 0.8-580 PL FFJ6:154
 GERANIOL 22-735 PL FFJ6:154
 GERANYL-ACETATE 20-1,150 PL
 FFJ6:154
 GERMACRENE-D 3-312 PL FFJ6:154
 BETA-GURJUENE (?) PL BML
 CIS-3-HEXEN-1-OL
 ISOSPATHULENOL PL JSG
 LIGNOCERIC-ACID PL CRC
 LIMONENE 0.4-12 PL FFJ6:154
 LINALOOL 7-930 PL FFJ6:153
 CIS-LINALOOL-OXIDE PL FFJ6:153
 TRANS-LINALOOL-OXIDE PL FFJ6:153
 LINALYL-ACETATE 1-3,750 PL AYL
 FFJ6:154
 LINOLEIC-ACID 53,488 SD CRC
 LINOLENIC-ACID 161,100 SD CRC
 MANOOL PL 411/
 MYRCENE 1-42 PL FFJ6:154
 BETA-MYRCENE PL AYL
 NERAL 0.4-340 PL FFJ6:154
 NEROL 6-280 PL FFJ6:154
 NEROLIDOL PL AYL
 NERYL-ACETATE 6-144 PL FFJ6:154
 N-NONANOL PL HHB
 CIS-BETA-OCIMENE 2.4-24 PL FFJ6:154
 TRANS-BETA-OCIMENE 4.4-42 PL
 FFJ6:154
 3-OCTANOL PL CRC
 OLEANOLIC-ACID PL CRC
 OLEIC-ACID 69,006 SD CRC
 PALMITIC-ACID 22,419 SD CRC
 N-PENTANOL PL CRC

PHELLANDRENE PL AYL
 ALPHA-PINENE 0-3 PL FFJ6:154
 BETA-PINENE PL BML
 PROPIONIC-ACID-ESTER PL CRC
 PROTEIN 207,000 SD CRC
 ROSMARINIC-ACID 34,000 PL FT62:166
 SALVIA-4(14)-EN-1-ONE PL JSG
 SCLAREOL PL CRC
 BETA-SITOSTEROL PL CRC
 STEARIC-ACID 8,568 SD CRC
 TANNIN PL CRC
 GAMMA-TERPINENE 1-21 PL FFJ6:154
 TERPINEN-4-OL 1-6 PL FFJ6:154
 ALPHA-TERPINEOL 1-155 PL FFJ6:154
 TRANS-BETA-TERPINEOL PL BML
 TERPINOLENE 1-12 PL FFJ6:154
 ALPHA-TERPINYL-ACETATE 1-155 PL
 FFJ6:154
 URSOLIC-ACID PL CRC
 VALERIC-ACID-ESTER PL AYL

SALVIA TRILOBA L.

"GREEK SAGE"

APIGENIN-7-GLUCOSIDE PL JSG
 APIGENIN-7-GLUCURONIDE PL JSG
 BETULINIC-ACID PL HHB
 CAMPHENE 170-1,200 PL BML HHB
 CAMPHOR 160-5,040 PL BML HHB
 CARNESOL PL HHB
 BETA-CARYOPHYLLENE 500-2,280 PL
 BML HHB
 CHRYSOERIOL-7-GLUCURONIDE PL
 JSG
 1,8-CINEOLE 2,760-18,600 PL BML HHB
 6,8-DI-C-GLUCOSYLAPIGENIN PL JSG
 EO 10,000-30,000 PL BML HHB
 6-HYDROXYLUTEIN-6,3'-DIMETHYL-
 ETHER PL JSG
 5-HYDROXY-6,7,4'-
 TRIMETHOXYFLAVONE PL HHB
 LIMONENE 100-690 PL BML HHB
 LINALOOL 700-5,040 PL BML HHB
 LUTEOLINE-DIGLUCOSIDE PL JSG
 LUTEOLIN-7-GLUCOSIDE PL JSG
 LUTEOLIN-7-GLUCURONIDE PL JSG
 LUTEOLIN-7-GLUCURONIDE-3'-
 GLUCOSIDE PL JSG
 6-METHOXY-APIGENIN-7-GLUCOSIDE
 PL JSG
 6-METHOXY-APIGENIN-7-GLUCU-
 RONIDE PL JSG
 6-METHOXY-LUTEOLIN-7-GLUCOSIDE
 PL JSG

6-METHOXY-LUTEOLIN-7-GLUCU-
RONIDE PL JSG
MYRCENE 150-900 PL BML HHB
OLEANOLIC-ACID 5,200 PL HHB
PICROSALVIN PL HHB
ALPHA-PINENE 270-1,800 PL BML HHB
BETA-PINENE 230-1,590 PL BML HHB
SALVIGENIN PL HHB
BETA-SITOSTEROL PL HHB
ALPHA-TERPINEOL 140-750 PL BML
HHB
THUJONE 100-1,620 PL BML HHB
BETA-THUJONE 160-1,500 PL BML HHB
URSOLIC-ACID 74,500 PL HHB

SAMBUCUS CANADENSIS L.

“AMERICAN ELDER;
ELDERBERRY”

ALANINE 300-1,485 FR USA 1/
ALPHA-AMYRIN-PALMITATE PL JSG
BETA-AMYRIN-PALMITATE PL JSG
ARACHIDIC-ACID 1,206-1,920 SD WOI
ARGININE 470-2,326 FR USA
ASCORBIC-ACID 360-1,782 FR USA
ASH 6,150-32,918 FR USA
ASPARTIC-ACID 580-2,871 FR USA
BALDRIANIC-ACID BK HHB
CALCIUM 380-1,881 FR USA
CAMPESTEROL PL JSG
CARBOHYDRATES 184,000-910,800 FR
USA
BETA-CAROTENE 4-18 FR USA
CYSTINE 150-742 FR USA
FAT 5,000-24,750 FR USA
FAT 201,000-320,000 SD HHB WOI
FIBER 70,000-346,000 FR USA
GLUTAMIC-ACID 960-4,752 FR USA
GLYCINE 360-1,782 FR USA
HISTIDINE 150-742 FR USA
IRON 16-79
ISOLEUCINE 270-1,336 FR USA
LEUCINE 600-2,970 FR USA
LINOLEIC-ACID 106,530-169,600 SD WOI
LINOLENIC-ACID 68,340-108,800 SD
WOI
LYSINE 260-1,287
METHIONINE 140-693 FR USA
MORRONISIDE 500-1,000 SH HHB
MUCILAGE SD HHB
NIACIN 5-25 FR USA
OLEIC-ACID 8040-12,800 SD WOI
PALMITIC-ACID 11,658-18,560 SD WOI
PANTOTHENIC-ACID 1-7 FR USA

PHENYLALANINE 400-1,980 FR USA
PHOSPHORUS 369-2,036 FR USA
POTASSIUM 2,699-14,356 FR USA
PROLINE 250-1,238 FR USA
PROTEIN 6,180-24,750 FR USA
PROTEIN 106,000 SD HHB
RESIN SD HHB
RIBOFLAVIN 1-3 FR USA
RUTIN 35,000 LF WOI
RUTIN FL HHB
BETA-SITOSTEROL PL JSG
STEARIC-ACID 5,628-8,960 SD WOI
STIGMASTEROL PL JSG
TANNIN SD HHB
THIAMIN 1-3 FR USA
THREONINE 270-1,336 FR USA
TRYPTOPHAN 130-559 FR USA
TYROSINE 510-2,524 FR USA
VALINE 330-1,634 FR USA

1/ Ag Handbook 8(9) cited as USA doesn't
specify the species for their nutritional data
on “elderberry”.

SAMBUCUS NIGRA L.

“EUROPEAN ALDER”

ALPHA-AMYRENONE BK CCOH
ALPHA-AMYRIN BK LF CCOH
BETA-AMYRIN FL
ALPHA-AMYRIN-PALMITATE LF AYL
BETA-AMYRIN-PALMITATE
ANTIRHININ FR
ARACHIDIC-ACID SD
ASCORBIC ACID 739-11,000 LF
ASCORBIC ACID 490 FR
ASTRAGALIN
BEHENIC-ACID
BETULIN
BIOTIN .007-.009 FR HHB
CAFFEIC-ACID PL JLS58:160
1-CAFFELOYL-BETA-D-GLUCOSIDE
CALCIUM-NITRATE
CALCIUM-OXALATE
CAMPESTEROL LF AYL
CAPRIFOLIC-ACID 20,000 SD
CAPRONIC-ACID SD
CAPRYLIC-ACID SD
BETA-CAROTENE 100-150 FR
BETA-CAROTENE 150 LF
CERYL-ALCOHOL BK WOI
CHLOROGENIC-ACID FL AYL
CHOLESTEROL HH
CHOLINE BK, LF, FL

CHRYSANTHEMIN FR
 CONIINE LF WOI
 P-COUMARIC-ACID FL WOI
 CYANIDIN-3-SAMBUBIOSIDE
 CYANIDIN-3-SAMBUBIOSIDE-5-
 GLUCOSIDE
 CYANIN FR
 CYCLOARTENOL FL
 DEXTROSE 25,000-30,000 FR
 EMULSIN
 EO 37-3,200 FL
 ETHYL-AMINE FL
 FAT 48,200 LF
 FAT 123,000 SD
 FERULIC-ACID PL JLS58:160
 1-FERULOYL-BETA-D-GLUCOSIDE
 FIBER 63,000 FR
 GLUCOSIDES 640
 HENEICOSANE 23,000
 N-HENTRIACONTANE LF CCOH
 N-HEPTACOSANE LF CCOH
 N-HEXACOSANE LF CCOH
 HEXEN-2-AL
 ALPHA-HYDROXYBEHENIC-ACID BK
 30-BETA-HYDROXYURSOLIC-ACID FL
 AYL
 INVERTOSE
 ISOAMYL-AMINE
 ISOBUTYL-AMINE FL
 ISOQUERCITRIN FL AYL
 KAEMPFEROL FL AYL
 LAURIC-ACID SD
 LEVULOSE 21,000-29,000 FR
 LINOLEIC-ACID FL
 LINOLENIC-ACID FL AYL
 LUPEOL FL HH
 MALIC-ACID 9,000-19,000 FR HH
 24-METHYLCYCLOARTENOL FL HH
 MYRISTIC-ACID SD
 NIACIN 4-7 FR HH
 NICOTINIC-ACID FR
 N-NONACOSANE LF CCOH
 N-OCTACOSANE LF CCOH
 OLEANOLIC-ACID BK LF CCOH
 OLEIC-ACID LF AYL
 PALMITIC-ACID SD
 PALMITOLEIC-ACID SD
 PECTIN 2,300 LF
 N-PENTACOSANE LF CCO
 PROTEIN 25,000 FR
 PROTEIN 269,000 SD
 QUERCETIN LF CCO
 RESIN 43,400 LF WOI
 RIBOFLAVIN 0.6-0.7

RUTIN 210-9,200 LF WOI FT60:182
 RUTIN FL AYL
 SAMBUBIOSE
 SAMBUCINE 1,100
 SAMBUCYANIN
 SAMBUNIGRIN 420 LF
 SHIKIMIC-ACID
 BETA-SITOSTEROL BK LF
 STEARIC-ACID
 STIGMASTEROL LF AYL
 SUGAR 47,000-58,000 FR
 TANNIN 4,400-30,000 LF AYL HHB
 THIAMIN 1
 N-TRIACONTANE LF CCOH
 TRICOSANE 18,720 FL HHB
 TYROSINE 2,200-2,900 FR
 UNDECYLENIC-ACID SD
 URSOLIC-ACID BK FL LF
 VALERIANIC-ACID FR
 WATER 791,000-819,000 FR WOI

SANGUINARIA CANADENSIS L.

"BLOODROOT"

ALKALOIDS 18,000-70,000 RT
 ALPHA-ALLOCRYPTOPINE RT 411/
 BETA-ALLOCRYPTOPINE RT 411/
 ALLOCRYPTOPINE
 BERBERINE RT 411/
 CHELERYTHRINE
 CHELILUTINE RT 411/
 CHELIRUBINE RT 411/
 COPTISINE RT 411/
 DIHYDROSANGUILUTINE PL JSG
 BETA-HOMOCHELIDONINE
 MALIC-ACID
 OXYSANGUINARINE PL JSG
 OXYSANGUINARIDINE RT 411/
 PORPHYROXIN
 PROTOPINE RT 411/
 PSEUDOCHELERYTHRINE
 RESIN
 SANGUIDARIDINE RT 411/
 SANGUIDIMERINE RT 411/
 SANGUILUTINE RT 411/
 SANGUINARINE 6,000-60,000 RT ABS
 SANGUIRUBINE PL JSG
 STARCH

SANGUISORBA MINOR SCOP.

"SMALL BURNET"

CAFFEIC-ACID
 CARBOHYDRATE 616,000-804,000

O-COUMARIC-ACID
 P-COUMARIC-ACID
 FAT 16,000-203,000 SD
 FAT 94,000 PL
 FIBER 76,000-244,000
 GALLIC-ACID
 P-HYDROXYBENZOIC-ACID
 KAEMPFEROL
 PROTEIN 66,000-174,000
 PROTEIN 111,000 LF
 QUERCETIN
 RESIN
 BETA-SITOSTEROL
 TANNIN
 VANILLIC-ACID

SANGUISORBA OFFICINALIS L.

“GREATER BURNET”

(+)-CATECHIN
 CATECHOL-TANINS 170,000
 HSU
 CYANIDIN-3-GLUCOSIDE HL
 HHB
 CYANIDIN-3,5-DIGLUCOSIDE FL
 HHB
 19-DEHYDROURSOLIC-ACID
 ELLAGITANNINS PL 411/
 FAT 135,000 SD JAD
 (+)GALLOCATECHIN HHB
 KAEMPFEROL HHB
 METHYL-GLUCOSIDE-GALLATES PL
 411/
 POMOLIC-ACID HSU
 PROTEIN 128,000 SD JAD
 QUERCETIN
 SANGUIIN-H-1
 SANGUIIN-H-2
 SANGUIIN-H-6
 SANGUISORBIC-ACID-DILACTONE RT
 HSU
 SANGUISORBIGENIN RT
 SANGUISORBIN 25,000-40,000 PL
 SANGUISORBINE-A
 SANGUISORBINE-B
 SANGUISORBINE-E
 SUGAR 9,000 RT HHB
 TANNIN 170,000 HSU
 TOMENTOSLIC-ACID
 PL JSG
 URSOLIC-ACID
 WAREMOKONIN
 ZIYUGLYCOSIDE-I
 ZIYUGLYCOSIDE-II

SANSEVIERIA TRIFASCIATA

PRAIN

“SNAKE PLANT”

“AFRICAN BOWSTRING HEMP”

ABAMAGENIN PL HHB
 N-BUTYL-4-OL-N-PROPYL-PHTHALATE
 LF RAA
 FIBER 25,000 LF WOI
 HEMICELLULOSE LF ABS
 4-O-METHYL-GLUCURONIC-ACID LF
 RAA
 NEORUSCOGENIN LF RAA
 (25S)-RUSCOGENIN LF RAA
 SANSEVIERIGENIN LF RAA
 SAPONINS PL WOI
 BETA-SITOSTEROL LF RAA
 D-XYLOSE LF RAA

SANTALUM ALBUM L.

“WHITE SANDALWOOD”

ALANINE FR HHB
 1-ALLOHYDROXYPROLINE FR HHB
 ASPARAGINE FR HHB
 BETULIC-ACID FR WOI
 BORNEOL WD HHB
 CITRONELLOL WD BML
 O-CRESOL WD BML
 P-CRESOL WD BML
 ALPHA-CURCUMENE WD BML
 BETA-CURCUMENE WD BML
 5,6-DIMETHYL-5-NORBORNEN-EXO-2-
 OL WD BML
 (E)-5-(2,3-DIMETHYL-3-NORTRICYCL)-
 PENT-3-EN-2-ONE WD BML
 ENDO-2-ENDO-3-DIMETHYL-
 NORBORNAN-EXO-2-OL WD BML
 ENDO-2-METHYL-3-METHYLIDENE-
 NORBORNAN-EXO-2-OL WD BML
 EO 100,000 RT WOI
 EO 15,000-62,500 WD WOI
 EPI-BETA-SANTALENE WD BML
 4-ETHYL-GUAIACOL WD BML
 EUGENOL WD BML
 EXO-NORBICYCLOEKASANTALAL PL
 JSG
 BETA-FARNESENE WD BML
 FAT 500,000-600,000 SD WOI
 FRUCTOSE FR WOI
 1-FURFURYL-PYRROLE WD BML
 GERANIOL WD BML
 GLUCOSE FR WOI

GUAIACOL WD BML
 D-10-HYDROXY-PALMITONE WX WOI
 ISOEUGENOL WD BML
 ISOVALERALDEHYDE WD HHB
 LACTONE WD HHB
 LINOLEIC-ACID FR WOI
 LYSINE FR HHB
 1-METHOXY-4-ALLYL-GUAIACOL WD BML
 P-METHYL-ACETOPHENONE WD BML
 4-METHYL-CYCLOHEX-3-EN-1-YL-METHYL-KETONE WD BML
 4-METHYL-CYCLOHEXA-1,3-DIEN-1-YL-METHYL-KETONE WD BML
 4-METHYL-GUAIACOL WD BML
 2-METHYL-3-METHYLENENORBORNAN-2-OL PL JSG
 11-METHYL-7-OXA-TETRACYCLODODECANE HHB
 NORTRICYCLOEKASANTALAL WD WOI
 NORTRICYCLOEKASANTALENE WD WOI
 NORTRICYCLOEKASANTALIC-ACID WD BML
 NORTRICYCLOEKASANTALOL WD BML
 N-OCTACOSANOL WX WOI
 OCTADEC-11-EN-9YN-ACID FR HHB
 OLEIC-ACID FR WOI
 PALMITIC-ACID FR WOI
 PALMITONE 440,000 WX HHB
 PHENOL WD HHB
 PROLINE FR HHB
 RESIN 50,000-80,000 WD HHB
 SANTALBIC-ACID SD WOI
 SANTALAL WD HHB
 (E)-ALPHA-SANTALAL WD BML
 (E)-BETA-SANTALAL WD BML
 ALPHA-SANTALENE WD CCO
 BETA-SANTALENE WD CCO
 ALPHA-SANTALIC-ACID WD WOI
 BETA-SANTALIC-ACID WD WOI
 GAMMA-SANTALIC-ACID WD HHB
 SANTALOL 13,500-61,250 WD HHB WOI
 SANTALOL 95,900 RT WOI
 ALPHA-SANTALOL WD CCO
 BETA-SANTALOL WD CCO
 SANTALONE WD WOI
 SANTENE WD HHB
 SANTENOL WD WOI

L-SANTENONE WD WOI
 SERINE FR HHB
 BETA-SITOSTEROL FR HHB
 STEAROLIC-ACID SD WOI
 SUCROSE FR WOI
 TANNIN WD HHB
 TERESANTALAL WD BML
 TERESANTALIC-ACID WD CCO
 TERESANTALOL WD CCO
 TERESANTANOL WD HHB
 ALPHA-TERPINEOL WD BML
 N-TRIACONTANOL WX WOI
 TRICYCLOEKASANTALIC-ACID WD BML
 TRICYCLOEKASANTALOL
 4-(P-TOLYL)-VALERALDEHYDE WD BML
 4-VINYL-GUAIACOL WD BML
 4-VINYL-PHENOL WD BML

SANTOLINA

CHAMAECYPARISSUS L.

"LAVENDER COTTON"

CAFFEIC-ACID PL CRC
 CATECHIN PL CRC
 O-COUMARIC-ACID PL CRC
 P-COUMARIC-ACID PL CRC
 CRYPTONE PL CRC
 P-CYMOL PL CRC
 EO 8,600 FL CRC
 CIS-2-{4-(5-FORMYL-2-THIENYL)BUT-3-YN-1-ENYL}-FURAN RT CRC
 TRANS-2-{4-(5-FORMYL-2-THIENYL)BUT-3-YN-1-ENYL}-FURAN RT CRC
 HISPIDULIN PL 411/
 LIMONENE PL CRC
 LUTEOLIN PL CRC
 6-METHOXY-FLAVONES PL 411/
 MENTH-1-EN-4-OL PL CRC
 MYRCENE PL CRC
 NEPETIN PL 411/
 PATULETIN PL CRC
 PECTOLINARIGENIN PL 411/
 PHELLANDRENE PL CRC
 PHELLANDRAL PL CRC
 PINENE PL CRC
 RESIN PL CRC
 TANNIN RT CRC
 ALPHA-TERPINEOL PL CRC
 THUJENE PL CRC
 VANILLIC-ACID PL CRC

SARCOSTEMMA ACIDUM
(ROXB.) VOIGT.

“SOMA”

ALPHA-AMYRIN PL CRC
BETA-AMYRIN PL CRC
CAOUTCHOUS 41,000 LX CRC
LUPEOL PL CRC
LUPEOL-ACETATE PL CRC
MALIC-ACID PL CRC
PHYTOSTEROL PL CRC
BETA-SITOSTEROL PL CRC
SUCCINIC-ACID PL CRC
SUCROSE PL CRC
TANNIN PL CRC

SASSAFRAS ALBIDUM (NUTT.)
NEES

“SASSAFRAS”

ALKALOIDS 200 RT CRC
4-ALLYL-1,2-(METHYLENEDIOXY)-
BENZENE PL JSG
ALUMINUM 6-740 ST
ALUMINUM 50-1,360 LF USG
ANETHOLE RT CRC
APIOLE RT CRC
ASARONE RT CRC
ASH 11,000-37,000 ST USG
ASH 33,000-68,000 LF USG
ASH 24,000-26,000 SD CRC
BARIUM 6-370 ST USG
BARIUM 10-204 LF USG
BOLDINE RT CRC
BORON 1-26 ST USG
BORON 2-48 LF USG
CALCIUM 913-10,360 ST USG
CALCIUM 2,607-17,680 LF USG
D-CAMPHOR 600-1,200 RT HHB
CAPRIC-ACID SD HHB
CAPRYLIC-ACID SD HHB
CARYOPHYLLENE RT CRC
CHROMIUM 0-2.59 ST USG
CHROMIUM 0.99-2.04 LF USG
CINNAMOLAUrine RT CRC
CITRAL LF HHB
COBALT 0-0.56 ST USG
CONIFERALDEHYDE RT CRC
COPAENE RT CRC
COPPER 0.2-56 ST USG
COPPER 1.6-102 LF USG
DESMETHOXY-ASCHANTIN RT
HHB

D-2,3-DIHYDROXY-1-(3,4-
METHYLENEDIOXYPHENYL)-PROPANE
RT HHB

ELEMICIN RT CRC
EO 10,000-20,000 RT HHB
EUGENOL RT HHB
FAT 119,000-604,000 SD CRC HHB
GALLIUM 0-0.34 LF USG
IRON 3-740 ST USG
IRON 33-1,020 LF USG
ISOBOLDINE RT CRC
LAURIC-ACID SD HHB
LEAD 0.1-37 ST USG
LEAD 1-34 LF USG
LINOLEIC-ACID SD HHB
MAGNESIUM 77-4,760 ST USG
MAGNESIUM 990-6,800 LF USG
MANGANESE 5-680 ST USG
MANGANESE 23-1,020 LF USG
L-MENTHONE RT CRC
5-METHOXYEUGENOL RT CRC
MOLYBDENUM 0-0.74 ST USG
MOLYBDENUM 0-0.48 LF USG
MUCILAGE RT HHB
MYRISTICIN RT CRC
NICKEL 0.08-1.8 ST USG
NICKEL 0.23-3.4 LF USG
NORBOLDINE RT CRC
NORCINNAMOLAUrine RT CRC
OLEIC-ACID SD HHB
D-PHELLANDRENE LF HHB
PHELLANDRENE RT HHB
PHLOBAPHEN PL 411/
PHOSPHORUS 132-1,776 ST USG
PHOSPHORUS 396-3,264 ST USG
ALPHA-PINENE 1,000-2,000 RT HHB
PIPERONYLACROLEIN RT HHB
POTASSIUM 1,430-12,580 ST USG
POTASSIUM 3,960-21,760 LF USG
PROTEIN 62,000-23,800 SD CRC
RESIN RT HHB
RETICULINE RT CRC
SAFRENE RT HHB
SAFROLE 8,000-16,000 RT HHB
SCANDIUM 0-0.11 ST USG
SCANDIUM 0-0.68 LF USG
D-SESAMIN RT HHB
SILVER 0-0.204 LF USG
BETA-SITOSTEROL RT HHB
STRONTIUM 3-370 ST USG
STRONTIUM 2-680 LF USG
TANNIN RT HHB
THUJONE RT CRC
TITANIUM 0.16-74 ST USG

TITANIUM 1-102 LF USG
 TUNGSTEN 1-3.4 LF USG
 VANADIUM 0.05-2.59 ST USG
 VANADIUM 0.16-3.4 LF USG
 ZINC 4-111 ST USG
 ZINC 10-136 ST USG
 ZIRCONIUM 0.2-5.5 ST USG
 ZIRCONIUM 0.66-10.2 LF USG

MENTHONE 280 PL BML 1/
 NEOISOMENTHOL 260 PL BML 1/
 NEOMENTHOL 30 PL BML 1/
 3-OCTANOL 70 PL BML 1/
 ALPHA-PINENE 40 PL BML 1/
 BETA-PINENE 50 PL BML 1/
 PULEGONE 1,550 PL BML 1/

1/ Assumes 1% EO

***SATUREJA DOUGLASII* (BENTH.)
 BRIQ.**

"DOUGLAS' SAVORY"

BICYCLOGERMACRENE TR PL BML
 BORNEOL 1-910 PL BML
 BETA-BOURBONENE 533 PL BML
 DELTA-CADINENE 13 PL BML
 CAMPHENE 1,183-2,795 PL BML
 CAMPHOR 2,392-5,941 PL BML
 CARVONE 1,040-2,340 PL BML
 CARYOPHYLLENE 1-39 PL BML
 1,8-CINEOLE 39-195 PL BML
 P-CYMELE 26 PL BML
 GERMACRENE-D 26 PL BML
 ISOMENTHONE 13-4,277 PL BML
 LIMONENE 234-1,508 PL BML
 LINALOOL 26-182 PL BML
 MENTHONE 26-1,950 PL BML
 METHYL-CARVACROL 65 PL BML
 MYRCENE 104 PL BML
 CIS-OCIMENE 234 PL BML
 TRANS-OCIMENE 143 PL BML
 ALPHA-PINENE 299-884 PL BML
 BETA-PINENE 130-572 PL BML
 PIPERITENONE 1-377 PL BML
 PIPERITONE 195-1,443 PL BML
 PULEGONE 1-6,695 PL BML
 SABINENE 26 PL BML
 ALPHA-TERPINENE 13 PL BML
 GAMMA-TERPINENE TR PL BML
 TERPINEN-4-OL 104-143 PL BML
 ALPHA-TERPINEOL 1-39 PL BML
 TERPINOLENE 39 PL BML
 THYMOL 39 PL BML

***SATUREJA GLABELLA* (MICHX.)
 BRIQ.**

"SMOOTH SAVORY"

GERMACRENE-D 30 PL BML 1/
 ISOMENTHOL 410 PL BML 1/
 ISOMENTHONE 7,040 PL BML 1/
 LIMONENE 50 PL BML 1/

***SATUREJA HORTENSIS* L.**

"SUMMER SAVORY"

ASH 21,100-105,000 PL CRC WOI
 BORNEOL PL BML
 BORON 25-37 PL BOB
 CALCIUM 23,429 PL CRC
 CAMPHENE PL HHB
 CAMPHOR PL HHB
 CARBOHYDRATE 755,000 PL CRC
 BETA-CAROTENE 34 PL CRC
 CARVACROL 450-6,000 PL WOI
 BETA-CARYOPHYLLENE PL HHB
 COPPER 8-9 LF USA
 P-CYMELE PL BML
 P-CYMOL 300-6,000 PL HHB
 DIPENTENE PL HHB
 EO 1,500-20,000 PL HHB WOI
 EO 4,000 LF WOI
 FAT 16,500-65,000 PL CRC WOI
 FAT 420,000 SD WOI
 FIBER 86,000-306,160 PL WOI
 FLOURINE 12 PL WOI
 GERANIOL PL HHB
 IRON 416 PL CRC
 LABIATIC-ACID PL WOI
 LIMONENE PL 411/
 LINOLEIC-ACID 75,600 SD WOI
 LINOLENIC-ACID 260,400 SD WOI
 MANGANESE 61 LF USA
 MUCILAGE PL HHB
 MYRCENE PL HHB
 NEROL PL HHB
 NIACIN 45 PL CRC
 OLEANOLIC-ACID 600 PL HHB
 OLEIC-ACID 50,400 SD WOI
 PALMITIC-ACID 8,400 SD WOI
 PENTOSANS 119,500 LF WOI
 BETA-PHELLANDRENE PL HHB
 PHOSPHORUS 1,538 PL CRC
 ALPHA-PINENE PL HHB
 BETA-PINENE PL HHB
 POTASSIUM 11,549 PL CRC
 PROTEIN 41,500-147,740 PL WOI

PROTEIN 230,000-240,000 SD CRC WOI
 RESIN PL HHB
 ROSMARINIC-ACID 26,000 PL
 FT62:166
 SABINENE PL HHB
 BETA-SITOSTEROL PL WOI
 SODIUM 264 PL CRC
 STEARIC-ACID 8,400 SD WOI
 SYLVESTRINE PL WOI
 TANNIN 40,000-85,000 PL HHB
 TERPINEN-4-OL PL BML
 ALPHA-TERPINENE PL HHB
 BETA-TERPINENE PL HHB
 ALPHA-TERPINEOL PL BML
 THIAMIN 4 PL CRC
 THUJONE PL HHB
 THYMOL PL BML
 URSOLIC-ACID 1,000 ST WOI
 URSOLIC-ACID 1,700 LF WOI

SATUREJA MONTANA L.

“WINTER SAVORY”

BORNEOL PL BML
 BORON 25-37 PL BOB
 CAMPHENE PL BML
 CARVACROL 420-17,250 PL BML CRC
 HHB
 CARVONE PL BML
 1,8-CINEOLE PL BML
 COPPER 8-9 LF USA
 P-CYMENE 150-6,210 PL BML
 DIPENTENE 210-3,220 PL BML
 EO 1,500-23,000 PL GEO HHB
 GERANIOL PL BML
 GERANYL-ACETATE PL CRC
 LIMONENE PL BML
 LINALOOL 105-12,443 PL BML CRC
 LINALYL-ACETATE PL BML
 MANGANESE 61 PL USA
 MENTHADIEN-1,8(9)-OL-(7) PL HHB
 MYRCENE PL BML
 OLEANOLIC-ACID PL BML
 PERILLA-ALCOHOL PL BML
 PHENOL PL BML
 ALPHA-PINENE PL BML
 BETA-PINENE PL BML
 POLYISOPRENE PL BML
 ROSMARINIC-ACID 3,000 PL ABS
 ROSMARINIC-ACID 12,000 PL FT62:166
 TERPENE PL BML
 TERPINEN-4-OL 1-1,610 PL BML CRC
 TERPINEN-4-YL-ACETATE PL CRC

GAMMA-TERPINENE 20-3,105 PL BML
 CRC
 ALPHA-TERPINEOL 90-2,185 PL BML
 CRC
 ALPHA-TERPINYL-ACETATE PL CRC
 THUJANOL-4 PL BML
 THYMOL 75-1,472 PL HHB
 URSOLIC-ACID 16,000 PL WOI

SATUREJA VULGARIS (L.)
 FRITCH.

“COMMON SAVORY”

CARYOPHYLLENE 106 PL BML
 EO 500 PL BML
 GERMACRENE-D 259 PL BML

SAUSSUREA LAPP C. B.
 CLARKE

“COSTUS; KUTH”

ACETIC-ACID EO RT CCO
 ALKALOIDS 500 RT WOI
 ALPHA-AMORPHENIC-ACID EO RT
 CCO
 ALPHA-AMYRIN-STEARATE PL JSG
 BETA-AMYRIN-STEARATE PL JSG
 APLOTAXENE RT WOI
 BETULIN RT WOI
 CAMPHENE EO RT HHB
 CARYOPHYLLENE EO RT BML
 CARYOPHYLLENE-OXIDE EO RT BML
 CEDRENE EO RT HHB
 CEDROL EO RT HHB
 ALPHA-COSTENE EO RT HHB
 BETA-COSTENE EO RT HHB
 COSTIC-ACID RT CCO
 COSTOL RT WOI
 COSTUNOLIDE RT WOI
 COSTUS-LACTONE RT CCO
 P-CYMENE EO RT HHB
 DEHYDROCOSTUS-LACTONE RT WOI
 DIHYDROAPLOTAXENE EO RT WOI
 DIHYDROCOSTUNOLIDE RT WOI
 DIHYDROCOSTUS-LACTONE
 DIHYDRO-DEHYDROCOSTUS-LACTONE
 RT WOI
 CIS-DIHYDROIONONE RT HHB
 22-DIHYDROSTIGMASTEROL RT HHB
 BETA-ELEMENE RT WOI
 EO 15,000-70,000 RT WOI
 4-ETHYLOCTANOIC-ACID EO RT CCO
 FAT 180,000 RT HHB

FRIEDELIN EO RT BML
 (Z,Z,Z)-1,8,11,14-HEPTADECATETRAENE
 RT CCO
 GUAIA-3,9,11-TRIENE-12-ACID EO RT
 BML
 HEPTANOIC-ACID EO RT CCO
 HEXANOIC-ACID EO RT CCO
 ALPHA-HUMULENE EO RT CCO
 INULIN 180,000 RT WOI
 ALPHA-IONONE RT WOI
 BETA-IONONE RT WOI
 (E)-9-ISOPROPYL-6-METHYLDECA-5,9-
 DIEN-2-ONE PL JSG
 3-ISOPROPYLPENTANOIC-ACID EO RT
 CCO
 ISOZALUZANIN PL JSG
 KUSHTIN
 LACTONES 7,500-8,250 RT WOI
 LINALOOL EO RT HHB
 LUPEOL PL JSG
 12-METHOXY-DIHYDROCOSTUNOLIDE
 RT WOI
 3-METHYLBUTYRIC-ACID EO RT CCO
 MYRCENE EO RT HHB
 NAPHTHALINE EO RT HHB
 OCTANOIC-ACID EO RT CCO
 7-OCTENOIC-ACID EO RT CCO
 OLEIC-ACID EO RT BML
 ALPHA-PHELLANDRENE EO RT HHB
 PENTADEC-1-ENE EO RT BML
 RESINOIDS 60,000 RT WOI
 SAUSSURINE 250 LF
 SAUSSURINE RT WOI
 BETA-SELININE RT WOI
 BETA-SITOSTEROL RT WOI
 STIGMASTEROL RT WOI
 TANNIN RT WOI
 TARAXASTEROL 250 LF WOI

SCHINUS MOLLE L.

"PERUVIAN PEPPERTREE;
 MASTIC-TREE;
 CALIFORNIA PEPPERTREE"

ASH 54,700 FR CRC
 CAMPHENE FR HHB
 CARVACROL FR WOI
 CARYOPHYLLENE FR WOI
 EO 33,500-52,000 FR WOI
 EO 2,000-10,000 LF WOI
 EO 21,000 FL WOI
 3-EPIMASTICADIENOLALIC-ACID PL
 JSG
 ETHYLPHENOL FR WOI

FAT 77,000-124,000 FR CRC
 FIBER 155,000 FR CRC
 Fisetin BK WOI
 GALLIC-ACID BK WOI
 GLUCOSE 190,000 FR WOI
 ISOMASTICADIENONALIC-ACID PL
 JSG
 ISOMASTICADIENONIC-ACID PL JSG
 KAEMPFEROL LF HHB
 LEUCODELPHINIDIN LF HHB
 D-LIMONENE FR HHB
 MYRCENE FR HHB
 MYRICETIN LF HHB
 PEPERIN FR WOI
 PERILLALDEHYDE FR HHB
 D-ALPHA-PHELLANDRENE FR WOI
 BETA-PHELLANDRENE FR WOI
 L-PHELLANDRENE FR WOI
 ALPHA-PINENE FR WOI
 BETA-PINENE FR HHB
 PROTEIN 75,000-85,000 FR CRC
 PROTOCATECHUIC-ACID BK WOI
 QUERCETIN LF HHB
 BETA-SITOSTEROL LF HHB
 SOBREROL FR WOI
 BETA-SPATHULENE PL JSG
 SYLVESTRINE FR HHB
 TANNIN 230,000 BK WOI

SCHINUS TEREBINTHIFOLIUS RADDI

"BRAZILIAN PEPPERTREE"

BAURENONE PL JSG
 CARDOL RE CRC
 EO 250,000-450,000 SD CRC
 FAT 80,000-322,000 SD CRC
 3-ALPHA-
 HYDROXYMASTICODIENONIC-ACID
 LF CRC
 KAEMPFEROL LF CRC
 LEUCOCYANIDIN PL CRC
 MASTICODIENONIC-ACID LF CRC
 MYRICETIN LF CRC
 PHELLANDRENE SD CRC
 PROTEIN 108,000 SD CRC
 QUERCETIN PL CRC
 RESIN BK CRC
 SCHINOL FR CRC
 BETA-SITOSTEROL LF CRC
 TANNIN BK CRC
 TEREBINTHIFOLIC-ACID PL JSG
 TEREBINTHONE FR CRC
 TRIACONTANE LF CRC

SCHISANDRA CHINENSIS
(TURCZ.) BAILL.

“CHINESE MAGNOLIAVINE”

ALUMINUM 174 FR PED
 ANGELOYLGOMISIN-O FR CCO
 ANGELOYLGOMISIN-P FR CCO
 ANGELOYLGOMISIN-Q FR CCO
 ANGELOYLISOGOMISIN-O FR CCO
 ARGOLIC-ACID FR CCO
 ARSENIC 0.18 FR CAL
 ASCORBIC-ACID 1,022 FR PED
 ASH 46,000 FR PED
 BENZOYLISOGOMISIN-O FR CCO
 CALCIUM 1,330-1,610 (-5,760) FR CAL
 SMO (PED)
 CARBOHYDRATES 709,000 FR PED
 BETA-CAROTENE 61 FR PED
 CHAMIGRENAL FR CCO
 BETA-CHAMIGRENE EO CCO
 BETA-CHAMIGRENOL EO CCO
 CHROMIUM 18 FR PED
 CITRAL EO CCO
 CITRIC-ACID PL CCO
 COBALT 104 FR PED
 COPPER 5-11 FR CAL SMO
 DEOXYSCHIZANDRIN PL CCO
 EPIGOMISIN-O FR CCO
 FAT 114,000 FR PED
 FIBER 76,000 FR PED
 FUMARIC-ACID PL CCO
 GOMISIN-A FR CCO
 GOMISIN-B FR CCO
 GOMISIN-C FR CCO
 GOMISIN-D FR CCO
 GOMISIN-E FR CCO
 GOMISIN-F FR CCO
 GOMISIN-G FR CCO
 GOMISIN-H FR CCO
 GOMISIN-J FR CCO
 GOMISIN-K-1 FR CCO
 GOMISIN-K-2 FR CCO
 GOMISIN-K-3 FR CCO
 GOMISIN-L-1 FR CCO
 GOMISIN-L-2 FR CCO
 GOMISIN-M-1 12 FR CCO
 GOMISIN-M-2 7 FR CCO
 GOMISIN-N 3,100 FR CCO
 GOMISIN-O FR CCO
 GOMISIN-R FR CCO
 IRON 190-350 FR CAL PED SMO
 KILOCALORIES 4,020 FR PED
 LIGNAN 7,000-57,000 FR HU HHB

LIGNAN 80,000 SD CCO
 LINOLENIC-ACID SD CCO
 MAGNESIUM 1,970-2,760 FR CAL PED
 SMO
 MALIC-ACID PL CCO
 MANGANESE 37-96 FR CAL PED SMO
 NIACIN TR FR PED
 PALMITIC-ACID SD CCO
 PALMITOLEIC-ACID SD CCO
 PHOSPHORUS 4,260 FR PED
 POTASSIUM 10,300-17,400 FR CAL PED
 SMO
 PREGOMISIN FR CCO
 PROTEIN 131,000 FR PED
 PROTOCATECHUIC-ACID PL CCO
 RIBOFLAVIN 0.5 FR PED
 SCHISANTHERIN-D FR CCO
 SCHIZANDRIN PL CCO
 GAMMA-SCHIZANDRIN 120 FR CCO
 SCHIZANDROL SD CCO
 SELENIUM 7.4 FR PED
 SESQUICARENE FR CCO
 SILICON 34 FR PED
 SODIUM 97-2,630 FR CAL PED SMO
 STEARIC-ACID SD CCO
 STEROIDS 1,000 SD HHB
 TARTARIC-ACID PL CCO
 THIAMIN 0 FR PED
 TIGLOYLGOMISIN-P 13 FR CCO
 TIN 940 FR PED
 TOCOPHEROLS 12 SD HHB
 WATER 913,000 FR PED
 WAX 5,000 SD HHB
 WUWEIZISU-C FR CCO
 D-ALPHA-YLANGENE FR CCO
 ZINC TR-19 FR CAL PED SMO

SCHIZONEPETA TENUIFOLIA
BRIQ.

“CHING-CHIEH; JING-JIE”

APIGENIN-7-O-BETA-D-GLUCOSIDE PL
 JSG
 CALCIUM 10,900 PL CCO
 COPPER 23 PL SMO
 EO 18,000 PL CCO
 IRON 1,700 PL SMO
 D-LIMONENE PL CCO
 LUTEOLIN-7-O-BETA-D-GLUCOSIDE PL
 JSG
 MAGNESIUM 3,390 PL SMO
 MANGANESE 68 PL SMO
 D-MENTHONE PL CCO
 DL-MENTHONE PL CCO

POTASSIUM 10,600 PL SMO
 L-PULEGONE PL CCO
 SCHIZONEPETOSIDE-A 400 FL CCO
 SCHIZONEPETOSIDE-B 40 FL CCO
 SODIUM 118 PL SMO
 ZINC 28 PL SMO

SCHOENOCAULON OFFICINALE

A. GRAY

"SABADILLA"

ACETIC-ACID SD CRC
 ALKALOIDS 10,000-60,000 SD CRC
 ANGELIC-ACID SD HHB
 CEBADINE 7,500-45,000 SD CRC
 CEVACINE SD ALK
 CEVADIC-ACID SD CRC
 CEVADILLINE SD CRC
 CEVADINE SD ALK
 CEVAGENINE SD ALK
 CEVINE SD ALK
 CEVINILIC-DELTA-LACTONE SD ALK
 CHELIDONIC-ACID SD CRC
 DEHYDROCEVAGENINE SD CRC
 FAT 90,000-250,000 SD CRC
 GERMIDINE SD 411/
 HYDROALKAMINE-S SD ALK
 NEOGERMIDINE SD 411/
 NEOSABADINE SD ALK
 OLEIC-ACID SD CRC
 PALMITIC-ACID SD CRC
 PROTOCEVINE SD ALK
 SABADENE SD ALK
 SABADILLENES SD ALK
 SABADINE SD ALK
 SABADININE PL JSJ
 SABATINE SD ALK
 SABINE SD ALK
 TIGLIC-ACID SD CRC
 VANILLIC-ACID SD CRC
 VANILLOYLCEVINE SD CRC
 VANILLOYLVERACEVINE SD ALK
 VERACEVINE SD ALK
 VERAGERMINE SD ALK
 VERATRIC-ACID SD CRC
 VERATRIDINE 2,500-15,000 SD CRC

SCLEROCARYA CAFFRA SOND.

"MARULA"

ASCORBIC-ACID 540-8,190 FR CRC
 ASH 2,000-24,000 FR CRC
 ASH 48,000-50,000 SD CRC

CALCIUM 60-725 SD CRC
 CALCIUM 1,430-1,490 SD CRC
 CARBOHYDRATES 75,000-904,000
 FR CRC
 CARBOHYDRATES 92,000-96,000
 SD CRC
 CITRIC-ACID FR CRC
 FAT 1,000-12,000 FR CRC
 FAT 530,000-600,000 SD CRC
 FIBER 5,000-60,000 FR CRC
 FIBER 27,000-28,000 SD CRC
 GUM 100,000 LF CRC
 IRON 1-12 FR CRC
 IRON 4 SD CRC
 KILOCALORIES 300-3,610 FR CRC
 KILOCALORIES 6,040-6,290 SD
 CRC
 MALIC-ACID FR CRC
 NIACIN 2-24 FR CRC
 NIACIN 7 SD CRC
 OLEIC-ACID 291,500-420,000 SD CRC
 PHOSPHORUS 190-2,290 SD CRC
 PHOSPHORUS 12,480-12,985 SD CRC
 PROTEIN 5,000-60,000 FR CRC
 PROTEIN 246,000-256,000 SD CRC
 RIBOFLAVIN 0.5-6 FR CRC
 RIBOFLAVIN 1.2 SD CRC
 TANNIN 35,000-100,000 BK CRC
 TANNIN 200,000 LF CRC
 THIAMIN 0.3-3.6 FR CRC
 THIAMIN 0.4 SD CRC
 WATER 917,000 FR CRC
 WATER 39,000 SD CRC

SCOPOLIA CARNIOLICA JACQ.

"SCOPOLIA"

AESCULETIN LF CRC
 ALKALOIDS 3,000-8,000 RH CRC
 ATROPINE 300 RH ALK
 CAFFEIC-ACID LF HHB
 CHLOROGENIC-ACID LF HHB
 CUSCOHYGRINE RH ALK
 HYOSCINE RH ALK
 HYOSCYAMINE RT ALK
 L-HYOSCYAMINE 4,000 RH CRC
 PSEUDOTROPINE RH ALK
 RUTIN LF CRC
 SCOPINE RH CRC
 SCOPOLAMINE RT ALK
 SCOPOLETIN RH HHB
 SCOPOLINE RH HHB
 SOLANIDINE PL ALK

3-ALPHA-TIGLOYLOXYTROPANE
RH ALK
TROPINE PL ALK

SCROPHULARIA BUEGERIANA
MIQ.

“HSUAN-SHEN; YUAN-SHEN”

ARSENIC 0.13 RT CAL
CALCIUM 2,670 RT CAL
COPPER 5-6 RT CAL
FRUCTOSE RT CCO
GLUCOSE RT CCO
HARPAGIDE
HARPAGOSIDE RT CCO
IRON 140 RT CAL
MAGNESIUM 2,060 RT CAL
MANGANESE 18 RT CAL
P-METHOXYCINNAMIC-ACID RT CCO
8-(O-METHYL-P-COUMAROYL)-
HARPAGIDE RT CCO
OLIGOSACCHARIDE RT CCO
POTASSIUM 14,500 RT CAL
SODIUM 96 RT CAL
STACHYOSE RT CCO
ZINC 13 RT CAL

SCUTELLARIA BAICALENSIS
GEORGI

“CHINESE SKULLCAP;
HUANG QIN”

ARSENIC 0.18 RT CAL
BAICALEIN RT CCO
BAICALEIN-7-O-GLUCOSIDE RT CCO
BAICALEIN-7-O-BETA-O-D-
GLUCOPYRANOSIDE RT ABS
BAICALIN 43,000 RT CCO
BAICALIN-7-GLUCURONIDE RT CCO
CALCIUM 4,630-10,300 RT CAL SMO
CAMPESTEROL RT CCO
CARTHAMIDIN PL JSG
CHRYSIN RT CCO
COPPER 13-18 RT CAL SMO
DIHYDROBAICALIN RT ABS
DIHYDROOROXYLIN
DIHYDROOROXYLIN-a
D-GLUCOSE RT CCO
HUANGQIN RT CCO
5,7,2'-TRIHYDROXYFLAVONE RT ABS
IRON 170-220 RT CAL SMO
ISOCARTHAMIDIN PL JSG

ISOWOGONIN PL JSG
KOGANEBANANIN RT CCO
MAGNESIUM 7,170-7,220 RT CAL SMO
MANGANESE 18-29 RT CAL SMO
MERCURY 0.08-RT CAL
NEOBAICALEIN PL HHB
NORWOGONIN RT ABS
OROXYLIN-A RT CCO
OROXYLIN-A-7-O-GLUCURONIDE RT
CCO
(2R,3R)-2',3,5,6',7-PENTAHYDROXY-
FLAVONONE RT CCO
POTASSIUM 6,200-9,120 RT CAL SMO
BETA-SITOSTEROL RT CCO
SKULLCAPFLAVONE-I RT CCO
SKULLCAPFLAVONE-II RT CCO
SODIUM 740-991 RT CAL SMO
STIGMASTEROL RT CCO
SUCROSE RT CCO
5,7,2',5'-TETRAHYDROXY-8,6'-
DIMETHOXYFLAVONE RT ABS
2S-2',5,6',7-TETRAHYDROXY-
FLAVONONE RT ABS
5,7,2'-TRIHYDROXYFLAVONE RT ABS
5,7,2'-TRIHYDROXY-8-
METHOXYFLAVONE RT ABS
5,2',5'-TRIHYDROXY-6,7,8-
TRIMETHOXYFLAVONE RT ABS
WOGONIN 5,000 RT CCO
WOGONIN-7-O-GLUCURONIDE RT CCO
ZINC 17-18 RT CAL SMO

SCUTELLARIA CHURCHILLIANA
FERNALD

“HYBRID SKULLCAP”

DELTA-CADINENE 9 PL BML
CARYOPHYLLENE 68 PL BML
CARYOPHYLLENE-OXIDE 14 PL BML
EO 300 PL BML
GERMACRENE-D 19 PL BML
ALPHA-HUMULENE 11 PL BML
LIGNIN
LINALOOL 26 PL BML
1-OCTEN-3-OL 58 PL BML
RESIN
SCUTELLAREIN
SCUTELLARIN
TANNIN

1/ hybrid between *S.lateriflora* x
S.galericulata

SCUTELLARIA DISCOLOR**COLEBR.****"DISCOLOR SKULLCAP"**

WOGONIN

NORWOGONIN

5,7,2'-TRIHYDROXY-8-

METHOXYFLAVONE

(.+.-)-5,2'-DIHYDROXY-7,8,6'-

TRIMETHOXYFLAVANONE

(.+.-)-5,2'-DIHYDROXY-6,7,6'-

TRIMETHOXYFLAVONONE

2',4'-DIHYDROXY-2,3',6'-

TRIMETHOXYCHALCONE

SCUTELLARIA GALERICULATA L.**"MARSH SKULLCAP"**

APIGENIN PL ABS

BAICALEIN PL ABS

BAICALEIN-7-BETA-L-RHAMNOSIDE

PL HHB

BAICALIN 10,000 LF HHB

CARYOPHYLLENE 176 PL BML

CHRYSIN PL ABS

CHRYSIN-7-GLUCURONIDE 27,000 PL

HHB

BETA-CUBEENE 20 PL BML

DIHYDROBAICALEIN PL ABS

DIHYDRONORWOGONIN PL ABS

EO PL HHB

TRANS-BETA-FARNESENE 102 PL BML

GERMACRENE-D 13 PL BML

ALPHA-HUMULENE 16 PL BML

6-HYDROXYLUTEIN PL ABS

LIMONENE 13 PL BML

LUTEOLIN PL ABS

MENTHONE 62 PL BML

OROXYLIN-A PL ABS

SCUTELLAREIN PL ABS

TANNIN 28,600-35,000 PL BML

WOGONIN PL ABS

Abs (Barberan; FT LVII 2:67.1986)

SCUTELLARIA LATERIFLORA L.**"MADDOG SKULLCAP"**

ALKANES

3,9-DIMETHYL-ALKANES PL JNP

2-METHYL-ALKANES PL JNP

3-METHYL-ALKANES PL JNP

ALUMINUM 258 PL PED

ASCORBIC-ACID 1,025 PL PED

ASH 96,000 PL PED

CALCIUM 4,550 PL PED

CARBOHYDRATES 780,000 PL PED

BETA-CAROTENE 18-19 PL PED

CHROMIUM 7 PL PED

COBALT 11 PL PED

FAT 15,000 PL PED

FIBER 82,000 PL PED

N-HENTRIACONTANE PL JNP

IRON 250 PL PED

KILOCALORIES 3,140 PL PED

LIGNIN PL JAD

MAGNESIUM 1,130 PL PED

MANGANESE 47 PL PED

NIACIN 35 PL PED

N-NONACOSANE PL JNP

N-PENTATRIACONTANE PL JNP

PHOSPHORUS 1,810 PL PED

POTASSIUM 21,800 PL PED

PROTEIN 109,000 PL PED

RESIN PL HHB

RIBOFLAVIN 2.2 PL PED

SCUTELLARIN PL HHB

SELENIUM 8.3 PL PED

SILICON 48 PL PED

SODIUM 160 PL PED

TANNIN PL HHB

THIAMIN 2.8 PL PED

TIN 1.2 PL PED

N-TRITRIACONTANE PL JNP

WATER 863,000 PL PED

WAX 12,000 PL JNP

ZINC 86 PL PED

SCUTELLARIA PARVULA MICHX.**"SMALL SKULLCAP"**

ACETOPHENONE 14 PL BML

BETA-BISABOLENE 54 PL BML

CIS-ALPHA-BISABOLENE 32 PL BML

ALPHA-BISABOLOL 185 PL BML

TRANS-ALPHA-BERGAMOTENE 121 PL

BML

DELTA-CADINENE 36 PL BML

GAMMA-CADINENE 9 PL BML

10-ALPHA-CADINOL 27 PL BML

CARYOPHYLLENE 47 PL BML

CARYOPHYLLENE-OXIDE 20 PL BML

EO 900 PL BML

TRANS-BETA-FARNESENE 23 PL BML

GERANIOL 1 PL BML

ALPHA-HUMULENE 19 PL BML

LINALOOL 10 PL BML

1-OCTEN-3-OL 2 PL BML
 BETA-SESQUIPHELLANDRENE 13 PL
 BML
 ALPHA-TERPINEOL 36 PL BML

SECHIUM EDULE (JACQ.) SW.

“CHAYOTE”

ALANINE 560-8,000 FR USA
 ALPHA-AMINO-UREIDOBUTYRIC-ACID
 PL JSG
 ARGININE 380-5,430 FR USA
 ASCORBIC-ACID 110-1,570 FR USA
 ASCORBIC-ACID 330-4,460 SH WOI
 ASH 4,000-57,145 FR USA
 ASH 21,600-122,000 LF JAF38:2137
 ASH 8,000-108,100 SH WOI
 ASPARTIC-ACID 1,010-14,430 FR USA
 CALCIUM 190-2,715 FR USA
 CALCIUM 592-3,345 LF JAF38:2137
 CALCIUM 660-8,920 SH WOI
 CARBOHYDRATES 54,000-771,430 FR
 USA
 M-CARBOXYPHENYLALANINE PL
 JSG
 BETA-CAROTENE 12-164 SH WOI
 CITRULLINE PL JSG
 COPPER 1.8-10 LF JAF38:2137
 FAT 1,000-42,860 FR USA WOI
 FAT 23,200-131,100 LF JAF38:2137
 FAT 22,000-297,300 SH WOI
 FIBER 7,000-100,000 FR USA
 FIBER 8,000-108,100 SH WOI
 GABA TR FR WOI
 GLUTAMIC-ACID 1,370-19,570 FR USA
 GLYCINE 450-6,430 FR USA
 GLYCOLIPIDS 7,145-40,365
 LFJAF38:2137
 HISTIDINE 160-2,285 FR USA
 IRON 4-57 FR USA
 IRON 46-262 LF JAF38:2137
 IRON 3-40 SH WOI
 ISOLEUCINE 480-6,855 FR USA
 KILOCALORIES 240-3,430 FR USA
 LEUCINE 840-12,000 FR USA
 LYSINE 430-6,145 FR USA
 MAGNESIUM 140-2,000 FR USA
 MAGNESIUM 670-3,785 LF JAF38:2137
 METHIONINE 10-145 FR USA
 NIACIN 5-70 FR USA
 NIACIN 8-110 SH WOI
 OXALIC-ACID 340 FR WOI
 PEROXIDASE LF WOI
 PHENYLALANINE 520-7,430 FR USA

PHOSPHOLIPIDS 6,728-38,010 LF
 JAF38:2137
 PHOSPHORUS 260-3,715 FR USA
 PHOSPHORUS 470-6,350 SH WOI
 POTASSIUM 1,500-21,430 FR USA
 POTASSIUM 3,100-41,890 SH WOI
 PROLINE 480-6,855 FR USA
 PROTEIN 7,000-128,570 FR USA WOI
 PROTEIN 26,900-152,000 LF JAF38:2137
 RIBOFLAVIN 0.4-5.7 FR USA
 RIBOFLAVIN 0.8-11 SH WOI
 SERINE 510-7,285 FR USA
 SODIUM 40-570 FR USA
 SODIUM 14-190 SH WOI
 THIAMIN 0.34.3 FR USA
 THIAMIN 0.3-4 SH WOI
 THREONINE 440-6,285 FR USA
 TRYPTOPHAN 120-1,715 FR USA
 TYROSINE 350-5,000 FR USA
 VALINE 690-9,860 FR USA
 WATER 925,000-930,000 FR USA WOI
 WATER 823,000 LF JAF38:2137
 WATER 926,000 SH WOI
 ZINC 0.5-73 LF JAF38:2137 WOI

SELENICEREUS GRANDIFLORUS
 BRITT. & ROSE

“NIGHT-BLOOMING CEREUS”

BETA-CYANIN PL CRC
 CACTICINE FL CRC
 CACTINE ST JFM
 GRANDIFLORINE FL CRC
 HORDENINE PL CRC
 HYPEROSIDE FL CRC
 ISORHAMNETIN-3-BETA-GALACTOSYL-
 RUTINOSIDE FL CRC
 ISORHAMNETIN-3-BETA-XYLOSYL-
 RUTINOSIDE FL CRC
 ISORHAMNETIN-3-GLUCOSIDE PL CRC
 KAEMPFERITRIN FL CRC
 NARCISSIN FL CRC
 RUTIN FL CRC

SENECIO AUREUS L.

“LIFEROOT”

“SQUAWWEED”

FLORIDANINE PL JSG
 FLOROSININE PL JSG
 OTOSININE PL JSG
 RESIN PL CRC
 SENECEFOLINE SH ALK

SENECINE SH ALK
SENECIONINE SH ALK
TANNIN PL CRC

SENNA ALATA (L.) ROXB.

“RINGWORM BUSH”

ALOE-EMODIN PL JSG
CHRYSAROBIN LF JFM
CHRYSOPHANOL PL JSG
CHRYSOPHANOL-GLYCOSIDE LF HHB
DIHYDROXYMETHYLANTHRAQUINONE
LF JFM
1,5-DIHYDROXY-8-METHOXY-2-
METHYL-ANTHRAQUINONE...
GLUCOPYRANOSIDE EMODIN PL JSG
FAT 29,000-35,000 SD CRC
PROTEIN 161,000-181,000 SD CRC
RHEIN PL JSG
RHEIN-GLYCOSIDE LF HHB
BETA-SITOSTEROL RT HHB
TANNIN LF JFM
1,3,8-TRIHYDROXY-2-METHYL-
ANTHRAQUINONE RT HHB

SENNA OBTUSIFOLIA (L.)

H.IRWIN & BARNEBY

“SICKLEPOD”

ALANINE 6,500 SD JAF38:2169
ALATERNIN-1-O-BETA-D-
GLUCOPYRANOSIDE
PL JSG
ANTHRAQUINONE 300-1,000 SD
JAF38:2169
ANTHRAQUINONES 10,000-20,000 SD
JAF38:2169
ARABINOSE 3,280 SD JAF38:2169
ARACHIDIC-ACID 850 SD JAF38:2169
ARGININE 10,200 SD JAF38:2169
ASH 42,000-48,100 SD JAF38:2169
ASPARTIC-ACID 15,000 SD JAF38:2169
BEHENIC-ACID 475 SD JAF38:2169
CADMIUM 0 SD JAF38:2169
CAFFEIC-ACID? SD JAF38:2169
CALCIUM 4,100-6,590 SD JAF38:2169
CARBOHYDRATE 665,000-689,000 SD
JAF38:2169
CHLOROGENIC-ACID TR SD JAF38:2169
CHRYSOBTUSIN-1-O-BETA-D-
GLUCOPYRANOSIDE PL JSG
CHRYSOPHANIC-ACID 200-6,000 SD
JAF38:2169

CHRYSOPHANIC-ACID-8-METHYL-
ESTER 20-400 SD JAF38:2169
COPPER 9-32 SD JAF38:2169
CYSTEINE 2,440 SD JAF38:2169
EMODIN 100-1,800 SD JAF38:2169
FAT 52,900-63,000 SD JAF38:2169
GADOLEIC-ACID 160 SD JAF38:2169
GALACTOSE 4,920 SD JAF38:2169
GLUCOSE 27,060 SD JAF38:2169
GLUTAMINE 21,300 SD JAF38:2169
GLYCINE 6,890 SD JAF38:2169
HISTAMINE 3,590 SD JAF38:2169
IRON 29-37 SD JAF38:2169
ISOCHLOROGENIC-ACID TR SD
JAF38:2169
ISOLEUCINE 5,960 SD JAF38:2169
LEUCINE 10,900 SD JAF38:2169
LINOLEIC-ACID 23,160 SD JAF38:2169
LINOLENIC-ACID 955 SD JAF38:2169
LYSINE 9,500 SD JAF38:2169
MAGNESIUM 2,820-3,220 SD JAF38:2169
MANGANESE 10-14 SD JAF38:2169
MANNOSE 44,280 SD JAF38:2169
MERCURY 0 SD JAF38:2169
METHIONINE 2,270 SD JAF38:2169
NEOCHLOROGENIC-ACID TR SD
JAF38:2169
NITROGEN 22,200-31,300 SD JAF38:2169
OBTUSIFOLIN 300-1,000 SD JAF38:2169
OLEIC-ACID 13,885 SD JAF38:2169
PALMITIC-ACID 8,960 SD JAF38:2169
PHENYLALANINE 6,530 SD JAF38:2169
PHYSICION 40-1,000 SD JAF38:2169
POTASSIUM 9,120-9,200 SD JAF38:2169
PROLINE 5,360 SD JAF38:2169
PROTEIN 137,280-195,310 SD JAF38:2169
QUESTIN 200-1,500 SD JAF38:2169
RAFFINOSE 200-1,500 SD JAF38:2169
REDUCING-SUGAR 1,000 SD JAF38:2169
SELENIUM 0 SD JAF38:2169
SERINE 7,590 SD JAF38:2169
BETA-SITOSTEROL 1,000-2,000 SD
JAF38:2169
SODIUM 770-930 SD JAF38:2169
STACHYOSE SD JAF38:2169
STARCH 2,000 SD JAF38:2169
STEARIC-ACID 3,550 SD JAF38:2169
SUCROSE SD JAF38:2169
SUGAR 81,000-83,000 SD JAF38:2169
THREONINE 5,940 SD JAF38:2169
TRYPTOPHAN 2,180 SD JAF38:2169
TYROSINE 4,420 SD JAF38:2169
VALINE 7,420 SD JAF38:2169
WATER 96,800-97,200 SD JAF38:2169

XYLOSE 2,460 SD JAF38:2169
ZINC 10-76 SD JAF38:2169

SENNA OCCIDENTALIS (L.) H.
IRWIN & BARNEBY

“COFFEE SENNA”

ACHROSINE W&B
ALOE-EMODIN SD
ANTHRAQUINONES 19,000 RT
HHB
ANTHRONES 45,000 RT HHB
APIGENIN-C-GLYCOSIDE FH HHB
BIANTHRAQUINONE PL JSG
CALCIUM 7,450 SD SMO
CAMPESTEROL SD
CASSIOLLIN PL JSG
CHRYSAROBIN 2,500 SD
CHRYSOPHANOL LF RT SD
COPPER 15 SD SMO
1,7-DIHYDROXY-5-
METHOXYCARBONYL-3-
METHYLXANTHONE
EMODIN RT
EO 175-182 SD WOI
FAT 23,000-39,000 SD CRC HHB
FUNICULOSIN PL JSG
6-O-ALPHA-D-GALACTOPYRANOSYL-
D-MANNOPYRANOSE SD CCO
O-ALPHA-D-GALACTOPYRANOSYL-(1—
6)-BETA-D-MANNOPYRANOSYL...
GLUCOSE SD
GUM SD
HELMINTHOSPORIN SD
IRON 1,300 SD SMO
ISLANDICIN SD CCO
JACEIDIN-7-RHAMNOSIDE PL JSG
LINOLEIC-ACID 7,850-8,164 SD WOI
LINOLENIC-ACID 1,575-1,638 SD WOI
MAGNESIUM 2,880 SD SMO
MANGANESE 42 SD SMO
4-O-BETA-D-MANNOPYRANOSYL-D-
MANNOPYRANOSE SD CCO
O-ALPHA-D-MANNOPYRANOSYL-(1—
4)-O-BETA-D-MANNOPYRASONYL...
MATTEUCINOL-7-RHAMNOSIDE LF
CCO
MUCILAGE 360,000 SD HHB
OLEIC-ACID 7,675-7,982 SD WOI
OXYMETHYLANTHRAQUINONE
3,000 RT
OXYMETHYLANTHRAQUINONE
2,500 SD

PHYSCION RT HHB
PHYSCION-DIANTHRONE SD
PHYSCION-1-BETA-D-
GLUCOPYRANOSIDE FL CCO
POTASSIUM 9,560 SD SMO
PROTEIN 181,000-249,000 SD CRC
QUERCETIN RT
RHEIN SD
ALPHA-3-SITOSTEROL
BETA-SITOSTEROL-ALPHA-GLUCOSIDE
SD
GAMMA-SITOSTEROL
SODIUM 45 SD SMO
TANNIC-ACID SD
TANNIN SD
4,4',5,5'-TETRAHYDROXY-2,2'-DIM-
ETHYL-1,1'-BIANTHRAQUINONE LF
XANTHORIN SD CCO
ZINC 41 SD SMO

SERENOA REPENS (BARTRAM)
SMALL

“SAW PALMETTO”

ACETOSYRINGONE WD HHB
ACETOVANILLONE WD HHB
ANTHRANILIC-ACID FR HHB
ARABINOSE FR 411/
CAPRIC-ACID FR HHB
CAPROIC-ACID FR HHB
CAPRYLIC-ACID FR HHB
BETA-CAROTENE FR HHB
EO 5,400-20,000 FR HHB 411/
FAT 40,000-128,000 FR HHB
FERULIC-ACID FR HHB
LAURIC-ACID SD HHB
LIPASE FR HHB
MANNITOL FR HHB
MYRISTIC-ACID SD HHB
OLEIC-ACID SD HHB
P-OXYBENZALDEHYDE WD HHB
P-OXYBENZOIC-ACID WD HHB
PALMITIC-ACID SD HHAB
BETA-SITOSTEROL 189 FR HHB
BETA-SITOSTEROL-D-GLUCOSIDE 220
FR HHB
STEARIC-ACID SD HHB
SYRINGALDEHYDE WD HHB
SYRINGIC-ACID WD HHB
TANNIN 75,800 RT HHB
TANNIN 54,800 ST HHB
VANILLIC-ACID WD HHB
VANILLIN WD HHB

***SESAMUM INDICUM* L.**

"SESAME"

2-ACETYL-3-METHYL-FURAN SD WOI
 ACETYL-PYRAZINE SD WOI
 2-ACETYL-PYRROLE SD WOI
 AGMATINE LF HHB
 ALANINE 5,510-14,802 SD USA
 EFN26:71
 ARACHIDIC-ACID 1,312-6,910 SD WOI
 ARGININE 15,800-34,930 SD USA
 EFN26:71
 ASARININ SD WOI
 ASH 124,000 LF CRC
 ASH 42,270-65,000 SD CRC USA
 ASPARTIC-ACID 9,890-23,795 SD USA
 EFN26:71
 BIOTIN 0.06 SD WOI
 BORON 4-13 SD BOB
 CAFFEIC-ACID LF HHB
 CAFFEIC-ACID FR HHB
 CALCIUM 800-12,638 SD CRC USA
 N-CARBAMYLPUTRESCINE LF HHB
 CARBOHYDRATE 593,000 LF CRC
 CARBOHYDRATE 93,900-245,990 SD
 CRC USA
 BETA-CAROTENE TR SD CRC
 CEPHALIN 133,168-233,856 SD WOI
 CHLOROGENIC-ACID LF WBB
 CHOLINE 1,320 SD WOI
 CHROMIUM 1.4 SD ABS 5/
 CITRULLIN LF HHB
 COBALT 0.3 SD ABS 5/
 COPPER 14-56 USA ABS 5/
 O-COUMARIC-ACID LF HHB
 O-COUMARIC-ACID FR HHB
 P-COUMARIC-ACID LF HHB
 P-COUMARIC-ACID FR HHB
 CYSTINE 2,380-5,494 SD USA EFN26:71
 EPIASARININ SD WOI
 FAT 48,000 LF CRC
 FAT 328,000-576,321 SD CRC USA
 FERULIC-ACID LF HHB
 FERULIC-ACID FR HHB
 FIBER 166,000 LF CRC
 FIBER 27,100-67,000 SD CRC USA
 FOLACIN 0.967-1.015 SD USA
 FOLIC-ACID 0.2 SD WOI
 ALPHA-FORMYL-PYRROLE SD WOI
 FURFURYL-ALCOHOL SD WOI
 GADOLEIC-ACID 700-734 SD USA
 GALACTOSE SD WOI
 ALPHA-GLOBULIN SD WOI

GLUCOSE SD WOI
 GLUTAMIC-ACID 24,670-51,927 SD USA
 EFN26:71
 GLYCINE 5,890-19,918 SD USA EFN26:71
 GUALACOL SD CRC(FNS)
 HEXADECENOIC-ACID 0-2,880 SD WOI
 HISTIDINE 3,050-7,112 SD USA
 EFN26:71
 INOSITOL 740 SD WOI
 IODINE 0.023 SD WOI
 IRON 20-169 SD USA WOI
 LECITHIN 58-395 SD WOI
 ISOLEUCINE 7,630-13,541 SD USA
 KCAL 6,700 EFN26:71
 LEUCINE 4,430-22,586 SD USA EFN26:71
 LIGNOCERIC-ACID SD WOI
 LINOLEIC-ACID 123,656-278,784 SD WOI
 ALPHA-LINOLENIC-ACID 3,760-3,945
 SD USA
 LYCHNOSE SD WOI
 LYSINE 2,890-8,729 SD USA EFN26:71
 MAGNESIUM 3,052-4,082 SD USA
 MANGANESE 14 SD USA
 METHIONINE 3,120-9,413 SD USA
 EFN26:71
 2-METHOXY-4-ETHYLPHENOL SD
 CRC(FNS)
 M-METHOXYPHENOL SD CRC(FNS)
 P-METHOXYPHENOL SD CRC(FNS)
 2-METHOXY-4-VINYLPHENOL SD
 CRC(FNS)
 MYRISTIC-ACID 328-1,728 SD WOI
 NIACIN 36-57 SD CRC USA
 NICKEL 1.2 SD ABS 5/
 OLEIC-ACID 114,800-284,544 SD WOI
 PABA 0.65 SD WOI
 PALMITIC-ACID 25,584-54,144 SD WOI
 PALMITOLEIC-ACID 1,490-1,563 SD
 USA
 PANTOTHENIC-ACID 0.5-10 SD USA
 WOI
 PEDALIN LF CCO
 PHENOL SD CRC(FNS)
 PHENYLALANINE 5,710-9,863 SD USA
 EFN26:71
 PHOSPHOLIPIDS 111-760 SD WOI
 PHOSPHORUS 5,000-8,898 SD CRC USA
 PHOSPHORUS 14,000 LF CRC
 PLANTEOSE SD WOI
 POTASSIUM 3,489-7,664 SD CRC USA
 PHYTOSTEROLS 7,140-7,490 SD USA
 PROLINE 8,100-14,277 SD USA EFN26:71
 PROTEIN 234,000 LF CRC
 PROTEIN 141,000-278,038 SD CRC USA

PROTOCATECHUIC-ACID LF HHB
 PUTRESCINE LF HHB
 PYRIDOXINE 1-8 SD USA
 RAFFINOSE SD WOI
 RIBOFLAVIN 0.6-3 SD CRC USA
 RIBOFLAVIN 21 LF CRC
 SERINE 6,150-13,751 SD USA EFN26:71
 SESAMIN SD CCO
 SESAMINOL PL JSG
 SESAMOL SD CCO
 SESAMOLIN SD CCO
 SESAMOSE SD WOI
 SESANOL PL JSG
 BETA-SITOSTEROL SD WOI
 SODIUM 46-634 SD CRC USA
 STARCH 150,000-200,000 SD HHB
 STEARIC-ACID 11,808-32,832 SD WOI
 STEROLS 656-3,110 SD WOI
 SUCROSE SD WOI
 THIAMIN 5-10 SD USA
 THREONINE 7,360-12,396 SD USA
 EFN26:71
 TOCOPHEROLS 150-250 SD WOI
 ALPHA-TOCOPHEROL 22-24 SD USA
 TRYPTOPHAN 2,010-4,969 SD USA
 EFN26:71
 TYROSINE 4,220-11,818 SD USA
 EFN26:71
 VALINE 5,490-15,527 SD USA EFN26:71
 WATER 45,100-50,820 SD USA
 ZINC 24-102 SD USA ABS 5/

5/Abs=Pak.J.Sci.Ind.Res.28:234.1985.

SIDA RHOMBIFOLIA L.

"BROOMWEED"
 "TEAPLANT"

ALKALOIDS 540 RT WOI
 ASCORBIC-ACID 900-4,545 LF CRC
 ASH 16,000-81,000 LF CRC
 CALCIUM 4,660-23,535 LF CRC
 CARBOHYDRATES 94,000-475,000 LF
 CRC
 BETA-CAROTENE 60-305 LF CRC
 EPHEDRINE RT WOI
 FAT 14,000-71,000 LF CRC
 FIBER 33,000-167,000 LF CRC
 IRON 50-253 LF CRC
 KILOCALORIES 630-3,180 LF CRC
 MUCILAGE ST WOI
 NIACIN 21-105 LF CRC
 PHOSPHORUS 580-2,930 LF CRC
 PROTEIN 74,000-374,000 LF CRC

RIBOFLAVIN 4.7-24 LF CRC
 SAPONIN LF JFM
 THIAMIN 2.2-11 LF CRC
 WATER 802,000 LF CRC

SIEGESBECKIA ORIENTALIS L.

"SAINT PAUL'SWORT; HSI CHIEN"

ARSENIC 0.25 PL CAL
 CALCIUM 11,100 PL CAL
 COPPER 9-10 PL CAL
 DARUTIGENOL RT WOI
 DARUTINE 1,500 RT WOI
 DARUTOSIDE PL HHB
 IRON 190 PL CAL
 ISODARUTIGENOL-B RT WOI
 ISODARUTIGENOL-C RT WOI
 MAGNESIUM 2,660 PL CAL
 MANGANESE 231 PL CAL
 ORIENTALIDE PL JSG
 POTASSIUM 20,400 PL CAL
 BETA-SITOSTEROL PL HHB
 SODIUM 90 PL CAL
 STIGMASTEROL PL HHB
 ZINC 17 PL CAL

SILYBUM MARIANUM (L.)

GAERTN.

"MILK THISTLE"

ALUMINUM 267 PL PED
 APIGENIN FR PM50:310
 ARACHIDIC-ACID PL JSG
 ASH 63,000 PL PED
 BEHENIC-ACID PL JSG
 CALCIUM 6,460 PL PED
 BETA-CAROTENE 31 PL PED
 CHROMIUM 22 PL PED
 CHRYSOERIOL FR PM50:310
 COBALT 41 PL PED
 DEHYDROCONIFERYL-ALCOHOL SD
 HHB
 2,3-DEHYDROSILYCHRISTIN PL JSG
 2,3-DEHYDROSILYMARIN PL JSG
 3-DEOXSILYCHRISTIN FR PM50:248
 DIHYDROSILYBIN PL 411/
 EO 1,000 SD HHB
 ERIODICTYOL FR PM50:310
 FAT 58,000 PL PED
 FAT 160,000-450,000 SD CRC HHB WOI
 FUMARIC-ACID LF WOI
 HEPTADECATRIEN-(1,8,15)-DIIN-(11,13)
 1.4 RT HHB

HEPTADECATRIEN-(1,8,15)-DIIN-(11,13)-
 OL-(10) 0.8 RT HHB
 HISTAMINE SD HHB
 IRON 1,060 PL PED
 ISOSILYBIN PL 411/
 KAEMPFEROL SD HHB
 LINOLEIC-ACID PL JSG
 LINOLENIC-ACID PL JSG
 MAGNESIUM 4,030 PL PED
 MANGANESE 147 PL PED
 NARINGENIN FR PM50:310
 NEOSILYHERMIN PL 411/
 PALMITIC-ACID PL JSG
 PHOSPHORUS 7,060 PL PED
 POTASSIUM 8,330 PL PED
 PROTEIN 143,000 PL PED
 PROTEIN 186,000-280,000 SD CRC HHB
 QUERCETIN SD HHB
 SELENIUM 171 PL PED
 SILANDRIN PL 411/
 SILICON TR PL PED
 SILYBIN PL 411/
 SILYCHRISTIN SD HHB
 SILYDIANIN PL 411/
 SILYHERMIN PL 411/
 SILYMARIN 7,000 SD WOI
 SILYMONIN PL 411/
 SODIUM TR PL PED
 STEARIC-ACID PL JSG
 TAXIFOLIN SD HHB
 TIN 42 PL PED
 TRIDECADIEN-(1,11)-TETRAIN-(3,5,7,9)
 3 RT HHB
 TRIDECADIEN-(3,5)-TRIIN-(7,9,11)-OL-
 (1)-ACETATE 0.1 RT HHB
 TRIDECATRIEN-(1,3,11)-TRIIN-(5,7,9)
 0.015 RT HHB
 TRIDECEN-(1)-PENTAIN-(3,5,7,9,11) 1
 RT HHB
 TRIDECEN-(12)-TETRAIN-(4,6,8,10)-AL-
 (1) 0.4 RT HHB
 TYRAMINE SD WOI
 WATER 882,000 PL PED
 ZINC 33 PL PED

SIMAROUBA AMARA AUBL.

"SIMARUBA BARK"

2'-ACETYLGLAUCARUBINE BK 411/
 2'-ACETYLGLAUCARUBINONE BK 411/
 ALKALOIDS 5,000-8,000 BK HHB
 13,18-DEHYDROGLAUCARUBINE BK
 411/

EO 1,000-1,800 BK HHB
 5-HYDROXYCANTHIN-6-ONE BK 411/
 MELIANONE BK 411/
 RESIN BK HHB
 SIMAROLIDE BK HHB
 SIMARUBIDIN 500 BK HHB
 SIMARUBIN 10,000 BK HHB
 SIMARUBOLIDE BK 411/
 TANNIN 200,000-270,000 BK HHB
 TIRUCALLA-7,24-DIENE-3,21-DIONE PL
 JSG
 TIRUCALLA-7,24-DIENE-3-ONE PL JSG

SIMAROUBA GLAUCA DC.

"SIMARUBA BARK"

ARACHIDIC-ACID 9,240-10,085 SD ABD
 JFM
 FAT 620,000-677,000 SD ABS JFM
 15-HYDROXYAILANTHONE PL HHB
 GLAUCARUBIN FR HHB
 DELTA-13(18)-GLAUCARUBIN FR HHB
 GLAUCARUBINONE SD HHB
 GLAUCARUBOLONE PL HHB
 15-O-BETA-D-GLUCOPYRANOSYL-
 GLAUCARUBOL PL JSG
 15-O-BETA-D-GLUCOPYRANOSYL-
 GLAUCARUBOLONE PL JSG
 LINOLEIC-ACID 11,780-12,860 SD ABD
 JFM
 LINOLENIC-ACID 1,425-1,555 SD ABD
 JFM
 OLEIC-ACID 355,700-388,400 SD ABD
 JFM
 PALMITIC-ACID 70,870-77,380 SD ABD
 JFM
 PALMITOLEIC-ACID 1,300-1,420 SD
 ABD JFM
 STEARIC-ACID 169,600-185,220 SD ABD
 JFM

SIMMONDSIA CHINENSIS (LINK) C. SCHNEID.

"JOJOBA"

ASH 14,000-16,000 SD CRC
 CALCIUM 372 SD CRC
 CARBOHYDRATES 246,000-291,000 SD
 CRC
 COBALT 0.7 SD CRC
 COPPER 10 SD CRC
 FAT 456,000-538,000 SD

FIBER 35,000-42,000 SD CRC
 IRON 46 SD CRC
 ISORHAMNETIN-3,7-DIRHAMNOSIDE
 LF CRC
 ISORHAMNETIN-3-RUTINOSIDE LF
 CRC
 MAGNESIUM 1,410 SD CRC
 MANGANESE 21 SD CRC
 NARCISSIN LF CRC
 NICKEL 4 SD CRC
 POTASSIUM 6,610 SD CRC
 PROTEIN 149,000-156,000 SD CRC
 SIMMONDSIN SD JSG
 SODIUM 136 SD CRC
 WATER 43,000-46,000 SD CRC
 ZINC 16 SD CRC

SINAPIS ALBA L.

"WHITE MUSTARD"

ALANINE 11,870-12,700 SD USA
 ARABINOSE SD HHB
 ARACHIDIC-ACID SD HHB
 ARGININE 17,500-18,725 SD USA
 ARSENIC 0.05 SD CAL
 ASCORBIC-ACID
 ASH 44,145-49,280 SD USA
 ASPARTIC-ACID 19,670-21,050 SD USA
 DELTA-5-AVENASTEROL SD RIZ
 BEHENIC-ACID SD HHB
 CALCIUM 4,983-5,850 SD USA
 CARBOHYDRATES 208,000-373,858 SD
 USA WOI
 BETA-CAROTENE 0 SD USA
 CELLULOSE (50%MUCILAGE) SD HHB
 CHOLESTEROL SD RIZ
 CHOLINE SD HHB
 CHROMIUM 18.6 SD ABS 5/
 COBALT 1.1 SD ABS 5/
 COPPER 6-8 SD CAL ABS 5/
 CYSTINE 5,820-6,227 SD USA
 EICOSENIC-ACID SD HHB
 EO 1,000-2,000 SD HHB WOI
 ERUCIC-ACID 104,194-117,064 SD USA
 FAT 283,271-312,364 SD USA
 FRUCTOSE SD USA
 FIBER 63,160-103,000 SD USA WOI
 GADOLEIC-ACID 26,117-29,407 SD USA
 GALACTURONIC-ACID SD HHB
 GLUCOBRASSICIN SP RIZ
 GLUCOSE SD HHB
 GLUCURONIC-ACID SD HHB
 GLUTAMIC-ACID 49,790-53,275 SD USA

GLYCINE 13,120-14,038 SD USA
 HISTIDINE 7,620-8,153 SD USA
 4-HYDROXYBENZOYLCHOLINE SD SP
 CCO
 P-HYDROXYBENZYLAMINE SD AYL
 P-HYDROXYBENZYLISOTHIOCYANATE
 SD AYL
 IRON 90-370 SD CAL USA
 ISOLEUCINE 10,810-11,576 SD USA
 LEUCINE 17,830-19,078 SD USA
 LINOLEIC-ACID 25,062-28,610 SD USA
 ALPHA-LINOLENIC-ACID 26,148-29,373
 SD USA
 LYSINE 15,190-16,252 SD USA
 MAGNESIUM 2,863-3,282 SD USA
 MANGANESE 21-41 SD CAL ABS 5/
 METHIONINE 4,800-5,136 SD USA
 MUCILAGE SD AYL
 MYROSIN SD WOI
 NEOGLUCOBRASSICIN SD RIZ
 NIACIN 79-84 SD USA
 NICKEL 3.6 SD ABS 5
 OLEIC-ACID 56,920-65,356 SD USA
 OXALIC-ACID SD HHB
 PALMITIC-ACID 7,420-8,539 SD USA
 PALMITOLEIC-ACID 570-674 SD USA
 PHENYLALANINE 10,670-11,416 SD
 USA
 PHOSPHORUS 8,100-9,330 SD USA
 POTASSIUM 6,393-9,130 SD CAL USA
 PROLINE 19,440-20,800 SD USA
 PROTEIN 245,095-276,000 SD USA WOI
 RIBOFLAVIN 4 SD USA
 SERINE 10,810-11,567 SD USA
 SINALBIN 25,000 SD AYL HHB
 SINALBINE SD AYL
 SINAPIC-ACID SD HHB
 SINAPINE 14,800 SD RIZ
 BETA-SITOSTEROL SD RIZ
 SODIUM 43-61 SD USA
 STEARIC-ACID 2,340-2,846 SD USA
 SUCROSE SD USA
 TETRACOSANOIC-ACID (18.5% OIL) SD
 RIZ
 THIAMIN 5-6 SD USA
 THREONINE 10,950-11,720 SD USA
 TRYPTOPHAN 5,260-5,628 SD USA
 TYROSINE 7,440-7,961 SD USA
 VALINE 13,250-14,178 SD USA
 WATER 66,450-75,700 SD USA
 ZINC 27-61 SD CAL USA ABS 5/

5/Abs.=Pak.J.Sci.Ind.Res.28:234. 1985.

SINOMENIUM ACUTUM

(THUNB.) REHD. & WILS.

"CHING-FENG-TENG"

ACUTUMIDINE RH CCO
 ACUTUMINE RH CCO
 CALCIUM 15,400 RH SMO
 COPPER 16 RH SMO
 DEHYDROSINOMENINE PL JSG
 DISINOMENINE RH CCO
 IRON 150 RH SMO
 ISOSINOMENINE RH CCO
 MAGNESIUM 360 RH SMO
 MAGNOFLORINE RH CCO
 MANGANESE 21 RH SMO
 MICHELALBINE RH CCO
 POTASSIUM 5,560 RH SMO
 L-SINACTINE RH CCO
 SINOACUTINE RH CCO
 SINOMENINE RH CCO
 BETA-SITOSTEROL RH CCO
 SODIUM 102 RH SMO
 STEPHARINE RH CCO
 STIGMASTEROL RH ST CCO
 DL-SYRINGARESINOL RH CCO
 TETRANDRINE RT CCO
 TUDURANINE RH CCO
 ZINC 15 RH SMO

SMILAX CHINA L.

"CHINA ROOT"

CINCHONIN RT WOI
 DIOSGENIN RT WOI
 FAT 111,000 SD WOI
 ISOSERYL-S-METHYLCYSTEAMINE-
 SULFOXIDE RT CCO
 OLEIC-ACID
 RESIN RT WOI
 RUTIN LF WOI
 SMILAX-SAPONIN-A RT HHB
 SMILAX-SAPONIN-B RT HHB
 SMILAX-SAPONIN-C RT HHB
 TANNIN RT WOI

SMILAX SPP

"SARSAPARILLA"

ALUMINUM 745 RT PED
 ASH 63,000 RT PED
 CALCIUM 2,980 RT PED
 CETYL-ALCOHOL RT HHB

CHROMIUM 17 RT PED
 COBALT 152 RT PED
 EO 300 RT HHB
 GLUCOSE RT HHB
 IRON 905 RT PED
 MAGNESIUM 1,670 RT PED
 MANGANESE 57 RT PED
 PARIGENIN RT HHB
 PARILLIN RT HHB
 PHOSPHORUS 1,770 RT PED
 POLLINASTANOL RT AYL
 POTASSIUM 9,530 RT PED
 RESIN 25,000 RT HHB
 SAPONIN 5,000-20,000 RT HHB
 SARASAPONIN RT HHB
 SARSAPONIN RT AYL
 SARSASAPOGENIN RT AYL
 SARSAPARILLOSIDE RT HHB
 SELENIUM 31 RT PED
 SILICON 88 RT PED
 BETA-SITOSTEROL RT HHB
 EPSILON-SITOSTEROL RT HHB
 SITOSTEROL-D-GLUCOSIDE RT HHB
 SMILAGENIN RT HHB
 SMILASAPONIN RT HHB
 SODIUM 21 RT PED
 STARCH 520,000 RT HHB
 STIGMASTEROL RT HHB
 TIN 18 RT PED
 WATER 787,000 RT PED
 ZINC 26 RT PED

SOLANUM CAROLINENSE L.

"HORSENETTLE"

SOLAMARGINE
 SOLASONINE
 SOLAURETHINE PL JSG

SOLANUM DULCAMARA L.

"BITTERSWEET"

"BITTER NIGHTSHADE"

ATROPINE SD ALK
 BRASSICASTEROL LF CRC
 CAMPESTEROL LF CRC
 CHOLESTEROL LF CRC
 CITROSTADIENOL SD CRC
 CYCLOARTENOL TC CRC
 CYCLOARTENOL-24-
 DIHYDROLANOSTEROL TC CRC
 DIOSGENIN PL CRC

D-GALACTOSE PL CRC
 D-GLUCOSE PL CRC
 GRAMISTEROL SD CRC
 15ALPHA-HYDROXYSOLADULCIDINE
 RT ALK
 15ALPHA-HYDROXYSOLASODINE
 RT ALK
 15ALPHA-HYDROXYTOMATADENOL
 RT ALK
 15ALPHA-HYDROXYTOMATADIDINE
 RT ALK
 ISOFUCOSTEROL PL CRC
 LOPHENOL SD CRC
 LYCOPENE FR CRC
 LYCOPHYLL PL CRC
 LYCOXANTHIN PL CRC
 24-METHYLENE-CHOLESTEROL TC
 CRC
 24-METHYLENE-CYCLOARTENOL TC
 CRC
 31-NORLANOSTEROL SD CRC
 OBTUSIFOLIOL SD CRC
 L-RHAMNOSE PL CRC
 BETA-SITOSTEROL LF CRC
 SOLACEINE PL CRC
 SOLADULCAMARIDINE PL ALK
 ALPHA-SOLADULCINE PL CRC
 BETA-SOLADULCINE PL CRC
 GAMMA-SOLADULCINE PL CRC
 SOLADULCIDINE FR ALK
 SOLAMARGINE PL CRC
 ALPHA-SOLAMARINE PL CRC
 BETA-SOLAMARINE PL CRC
 GAMMA-SOLAMARINE PL CRC
 SOLANIDINE FR ALK
 SOLASODINE SH ALK
 STIGMASTEROL LF CRC
 TIGOGENIN PL CRC
 TOMATID-5-EN-3BETA-OL PL ALK
 3BETA-5-TOMATIDEN-OL SH ALK
 3,5-TOMATIDIENE SH ALK
 TOMATIDINE FR ALK
 D-XYLOSE PL CRC
 YAMOGENIN PL CRC

SOLANUM MAMMOSUM L.

“LOVE APPLE”

“SUSUMBER”

SOLANIDINE FR ALK
 SOLASODINE FR ALK
 SOLASONINE FR JFM

SOLANUM MELONGENA L.

“EGGPLANT; AUBERGINE”

ALANINE 420-6,815 FR USA EFN26:71
 ALUMINUM 10-16 FR USG
 BETA-AMINO-4-ETHYL-GLYOXALINE
 FR WOI
 ARACHIDIC-ACID SD WOI
 ARGININE 610-7,559 FR USA EFN26:71
 ARSENIC 0.0035-0.004 FR USG
 ASCORBIC-ACID 13-947 FR CRC USA
 ASCORBIC-ACID 790-5,809 LF CRC
 ASH 5,000-80,000 FR USA USG
 ASH 20,000-147,000 LF CRC
 ASPARTIC-ACID 1,770-21,933 FR USA
 EFN26:71
 AUBERGENONE PL JSG
 BARIUM 3.5-5.6 FR USG
 BORON 1-8 FR BOB USG
 CADMIUM 0.3-0.44 FR USG
 CAFFEIC-ACID FR WOI
 CALCIUM 120-5,706 FR USA
 CALCIUM 2,540-18,676 LF CRC
 CARBOHYDRATES 56,000-811,000 FR
 CRC
 CARBOHYDRATES 66,000-485,000 LF
 CRC
 BETA-CAROTENE 0-6 FR CRC
 CHLORINE 520 FR WOI
 CHLOROGENIC-ACID FR WOI
 CHOLINE 520 FR WOI
 CHROMIUM 0.1-0.12 FR USG
 COBALT 0.07-0.08 FR USG
 COPPER 0.6-20 FR USA
 CYANIDIN FR HHB
 CYSTINE 60-743 FR USA EFN26:71
 DELPHINIDIN FR HHB
 DELPHINIDIN-P-COUMAROYL-
 MONORHAMNOSIDE-DIGLUCOSIDE
 FR HHB
 DELPHINIDIN-3-RUTINOSIDE-3-(4'-
 COUMAROYL-RUTINOSIDE)5-GLUC...
 ETHYL-CAFFEATE RT ABC42:623
 FAT 1,000-38,000 FR CRC USA
 FAT 4,000-29,000 LF CRC
 FAT 198,300-212,000 SD WOI
 FERULIC-ACID RT ABC42:623
 FIBER 9,000-137,000 FR CRC USA
 FOLACIN 0.1-2.6 FR USA
 GABA FR WOI
 GLYCINE 320-5,452 FR USA
 EFN26:71

- GLUTAMIC-ACID 2,010-24,907 FR USA
 EFN26:71
 GLYCOALKALOIDS 280-470 FR ABS
 HCN FR WOI
 HISTIDINE 240-3,098 FR USA EFN26:71
 5-HYDROXYTRYPTAMINE FR WOI
 GAMMA-HYDROXYGLUTAMIC-ACID
 FR HHB
 IRON 3-137 FR CRC USA
 IRON 155-1,140 LF CRC
 ISOLEUCINE 480-5,948 FR USA
 EFN26:71
 ISOSCOPOLETIN RT ABC42:623
 KILOCALORIES 250-3,370 FR CRC
 KILOCALORIES 150-2,790 LF CRC
 EFN26:71
 LEAD 1.4-1.6 FR USG
 LEUCINE 570-8,550 FR USA EFN26:71
 LINOLEIC-ACID 350-4,337 FR USA
 ALPHA-LINOLENIC-ACID 70-867 FR
 USA
 LITHIUM 0.28-0.32 FR USG
 LUBIMIN PL JSG
 LYCOPENE FR WOI
 LYCOXANTHIN FR WOI
 LYSINE 510-6,320 FR USA EFN26:71
 MAGNESIUM 85-1,563 FR USA
 MANGANESE 1.4-40 FR USA USG
 MERCURY 0.0007-0.0008 FR USG
 METHIONINE 60-1,487 FR USA
 EFN26:71
 MOLYBDENUM 0.5-0.56 FR USG
 MUFA 90-1,152 FR USA
 NASUNIN FR WOI
 NEOCHLOROGENIC-ACID FR WOI
 NIACIN 0.9-98 FR CRC USA
 NICKEL 0.7-0.8 FR USG
 NITROGEN 5,400-10,250 FR ABS
 OLEIC-ACID 80-991 FR USA
 OXALIC-ACID 291 FR WBB
 9-OXONEROLIDOL PL JSG
 PALMITIC-ACID 140-1,735 FR USA
 PALMITOLEIC-ACID 10-124 FR USA
 PANTOTHENIC-ACID 0.8-10 FR USA
 PECTIN 110,000 FR WOI
 PHENYLALANINE 430-5,700 FR USA
 EFN26:71
 PHOSPHORUS 189-5,836 FR USA
 PHOSPHORUS 380-2,794 LF CRC
 PHYTOSTEROLS 70-867 FR USA
 PIPECOLIC-ACID FR WOI
 POTASSIUM 620-32,000 FR ABS USA
 USG
 PROLINE 460-5,700 FR USA EFN26:71
 PROTEIN 10,000-200,000 FR CRC
 PROTEIN 46,000-338,000 LF CRC
 PUFA 420-5,204 FR USA
 RIBOFLAVIN 0.2-8.8 FR CRC USA
 SCOPOLETIN FR WOI
 SELENIUM 0.0007-0.0016 FR USG
 SERINE 410-5,576 FR USA EFN26:71
 SFA 200-2,478 FR USA
 SILVER 0.07-0.18 FR USG
 SODIUM 20-2,150 FR ABS CRC
 SOLAMARGINE FR ABS
 SOLANIDINE FR ALK
 SOLANINE FR ABS
 SOLASODINE FR ALK
 SOLASONINE FR ABS
 STEARIC-ACID 50-620 FR USA
 STRONTIUM 2-5.6 FR USG
 SUCROSE FR WOI
 SUGAR 20,000-30,000 FR HHB
 SULFUR 126-152 FR USG
 TANNIN 2,000 FR HHB
 THIAMIN 0.4-10 FR CRC USA
 THREONINE 380-4,957 FR USA
 EFN26:71
 TITANIUM 0.35-0.4 FR USG
 N-TRANS-P-COUMAROYL-
 OCTOPAMINE RT ABC42:623
 N-TRANS-P-COUMAROYL-TYRAMINE
 RT ABC42:623
 N-TRANS-FERULOYL-OCTOPAMINE RT
 ABC42:623
 N-TRANS-FERULOYL-TYRAMINE RT
 ABC42:623
 TRIGONELLINE FR WOI
 TRYPTAMINE FR HHB
 TRYPTOPHAN 100-1,239 FR USA
 EFN26:71
 TYRAMINE FR HHB
 TYROSINE 250-3,593 FR USA EFN26:71
 VALINE 550-7,063 FR USA EFN26:71
 VANILLIN RT ABC42:623
 VIT-B6 0.9-11.6 FR USA
 WATER 905,000-932,000 FR CRC USG
 WATER 864,000 LF CRC
 ZINC 18-25.6 FR USG
 ZIRCONIUM 1.4-1.6 FR USG
 ZMB ON AMINO ACIDS CALCULATED
 MULTIPLYING BY 10
-
- SOLANUM NIGRUM L.***
 "BLACK NIGHTSHADE"
 ALKALOIDS 1,010 FR
 ALKALOIDS 4,310 LF

2(S)-2-AMINOADIPIC-ACID PL
 RAA
 ASCORBIC-ACID 110-4,067 LF
 CALCIUM 1,999-14,400 LF
 CARBOHYDRATES
 64,000-560,000 LF
 CAROTENE 3,600-5,500 FR RAA
 BETA-CAROTENE 1-110 LF
 CHACONINE
 CHOLESTEROL PL RAA
 CITRIC-ACID 50,000 LF RAA
 DESGALACTOTIGONIN FR CCO
 DIOSGENIN 4,000-12,000 FR RAA
 FAT 4,000-53,000 LF
 FAT 215,000-300,000 SD RAA
 FIBER 11,000 LF
 FRUCTOSE 75,000-100,000 FR
 RAA
 D-GALACTOSE PL RAA
 26-O-(BETA-D-GLUCOPYRANOSYL)-22-
 METHOXY-25D-5-ALPHA...CCO
 GLUCOSE 75,000-100,000 FR RAA
 GLYCOALKALOIDS 21,000-42,500 FR
 RAA
 IRON 3-660 LF
 LINOLEIC-ACID 100,190 SD
 OLEIC-ACID 106,855 SD
 PALMITIC-ACID 3,870 SD
 PHOSPHORUS 540-4,000 LF
 PROTEIN 32,000-333,000 LF
 PROTEIN 175,000 SD
 RIBOFLAVIN 1-23
 SACCHAROPINE PL RAA
 SAPONIN
 BETA-SITOSTEROL PL JSG
 SOLAMARGINE PL JSG
 ALPHA-SOLAMARGINE PL JSG
 BETA-SOLAMARGINE PL RAA
 SOLANIGRIN PL RAA
 SOLANINE 0-40 FR RAA
 XI-SOLANINIGRIN
 SOLANSODAMINE
 SOLASODINE 3,000 LF RAA
 SOLASODINE 900-6,500 FR CRC
 SOLASODINE 200 RT RAA
 SOLASONINE PL JSG
 STEARIC-ACID 4,085 SD CRC
 TANNIN 70,000-100,000
 THIAMIN 1-12 LF
 TIGOGENIN 5,000 PL RAA
 UTTRONIN RT RAA
 UTTROSIDES
 WATER 821,000-878,000 LF CRC
 D-XYLOSE PL RAA

SOLANUM TORVUM SW.

“WILD EGGPLANT”

“SUSUMBA”

ALKALOIDS 3,700 FR WOI
 ASCORBIC-ACID 40-275 FR CRC
 ASH 11,000-75,000 FR CRC
 CAFFEIC-ACID PL RAA
 CALCIUM 1,040-7,125 FR CRC
 CARBOHYDRATES 107,000-733,000 FR
 CRC
 BETA-CAROTENE 4-27 FR CRC
 CHLOROGENIC-ACID PL RAA
 CHLOROGENIN FR WOI
 FAT 4,000-27,000 FR CRC
 FIBER 61,000-418,000 FR CRC
 IRON 46-315 FR CRC
 ISOCHLOROGENIC-ACID PL RAA
 KILOCALORIES 470-3,220 FR CRC
 NEOCHLOROGENIC-ACID PL RAA
 NIACIN 26-178 FR CRC
 PECTINS LF WOI
 PHOSPHORUS 700-4,795 FR CRC
 PROTEIN 24,000-164,000 FR CRC
 RIBOFLAVIN 0.9-6 FR CRC
 SITOSTEROL-D-GLUCOSIDE FR WOI
 SOLASODINE FR ALK
 THIAMIN 1.2-8 FR CRC
 WATER 854,000 FR CRC

SOLANUM TUBEROSUM L.

“POTATO”

ACETALDEHYDE
 ACETONE
 ACETYL-CHOLINE
 ACETYL-DEHYDRO-RISHITINOL 40
 NG/G TU NAP
 ACONITIC-ACID
 ACROLEIN EO
 ADENINE
 ALANINE 1,140-5,700 TU EFN26:71
 ALLANTOIN
 ALLOCYANIDOL PL JSG
 ALUMINUM 3.9-255 TU USG
 ALPHA-AMINOBUTYRIC-ACID
 GAMMA-AMINOBUTYRIC-ACID
 N-AMYL-ALCOHOL
 ALPHA-AMYLASE
 BETA-AMYLASE
 ANHYDROGALACTURONIC-ACID
 BETA-ANHYDROROTUNDOL TU
 NAP

- CIS-ANTHERAXANTHIN-5,6-MONOEOXIDE
 ARABINOSE
 ARABINOSYL-GLUCOSE
 ARGININE 950-6,850 TU USA EFN26:71
 ARSENIC 0.0013-0.6 TU AAS USG
 ASCORBIC-ACID 170-990 TU USA USG
 ASH 8,100-85,000 TU AAS USA USG
 ASPARTIC-ACID 4,340-24,050 TU USA EFN26:71
 BARIUM 0.078-60 TU USG
 (25S)-BAROGENIN 9.5 TU CCO NAP
 BEHENIC-ACID LF NAP
 BEHENYL-FERULATE TU NAP
 BENZOTHAZOL
 BORON 1-8 TU USG
 BROMINE 0.2-30 TU AAS
 N-BUTYRALDEHYDE EO
 CADAVERINE
 CADMIUM 0.004-0.455 TU AAS USG
 CAFFEIC-ACID 280 TU CRC(FNS)
 CALCIUM 34-2,550 TU USG
 CAMPESTEROL
 CAPRIC-ACID 10-48 TU USA
 CAPROIC-ACID LF NAP
 CARBOHYDRATE 171,000-862,000 TU CRC JAD USA
 BETA-CAROTENE 1 TU
 BETA-CAROTENE-5,6-MONOEOXIDE
 CAROTENOIDS 3 TU
 CATECHOLASE
 CELLULOSE
 ALPHA-CHACONINE 0.5-635 TU NAP
 BETA-CHACONINE TU NAP
 BETA-2-CHACONINE TU NAP
 GAMMA-CHACONINE TU NAP
 CHLORINE 16 TU
 2'CHLORO-N-DEMETHYL-DIAZEPAM 100 NG/KG TU NAP
 2'CHLORO-DIAZEPAM 20 NG/KG TU NAP
 CHLOROGENIC-ACID 22-71 TU NAP
 5-ALPHA-CHOLESTANE TU NAP
 CHOLESTEROL
 CHOLINE 330-1,000 TU JAD NAP
 CHOLINE 330 TU NAP
 CHROMIUM 0.002-1.4 TU AAS USG
 CITRIC-ACID 2,000 TU JAD NAP
 CITROSTADIENOL PL JSG
 COBALT 0.002-0.3 TU AAS USG
 COPPER 0.48-14 TU AAS USG
 P-COUMARIC-ACID 4 TU CRC(FNS)
 P-COUMAROYL-GLUCOSE FR
 CROTONALDEHYDE
 CRYPTOCHLOROGENIC-ACID 11 TU NAP
 CRYPTOXANTHIN
 CRYPTOXANTHIN-5,6-DIEPOXIDE
 CUSCOHYGRINE RT NAP
 CYANOSIDE PL JSG
 CYCLOARTENOL TU NAP
 CYCLODEHYDROISOLUBIMIN 0.7 TU NAP
 CYCLOLAUDENOL FR
 CYANIN FL
 CYNAROSIDE FL NAP
 CYSTINE 230-1,235 TU NAP EFN26:71
 DEACETYL-PHYTUBERIN 36 TU NAP
 DELPHININ FL
 DELPHINIDIN-3-RUTINOSIDE
 N-DEMETHYL-DIAZEPAM 200 NG/KG TU NAP
 DEMISSIDINE TU NAP
 DEMISSINE TU NAP
 DIAZEPAM 100 NG/KG TU NAP
 3,4-DICAFFEOYL-QUINIC-ACID 3 TU NAP
 3,5-DICAFFEOYL-QUINIC-ACID TR TU NAP
 DIGALACTOSYL-GLYCEROL
 9-DIHYDRO-OCTADECADIENOIC-ACID LF NAP
 DIHYDROXY-HEXADECANOIC-ACID LF NAP
 2-(1',2'DIHYDROXY-1'-METHYLETHYL)-6,10-DIMETHYL-9-HYDROXY-SPIRO-(4,5)-DEC-6-EN-8-ONE TU NAP
 4-ALPHA,14-ALPHA-DIMETHYLCHOLESTA-8,24-DIEN-3-BETA-OL
 1,4-DIMETHYLNAPHTHALENE
 1,6-DIMETHYLNAPHTHALENE
 DIMETHYLSULFIDE
 6,10-DIMETHYL-SPIRO-(4,5)-DEC-6-EN-2,8-DIONE TU NAP
 DOCOSAN-1-OL LF NAP
 EICOSANOIC-ACID LF NAP
 EICOSAN-1-OL LF NAP
 EICOSYL-FERULATE TU NAP
 EO 2
 EPILUBIMIN TU NAP
 ETHANETHIOL
 2-ALPHA-ETHOXY-DIHYDRO-PHYTUBERIN TU NAP
 2-BETA-ETHOXY-DIHYDRO-PHYTUBERIN TU NAP
 FAT 1,000-9,000 TU CRC JAD
 FERULIC-ACID 28 TU CRC(FNS)

TRANS-N-FEROLOYL-PUTRESCINE TU
 NAP
 FIBER 3,000-27,000 TU CRC USA
 FLUROINE 0.06-1 TU AAS
 FOLIC-ACID 0.074 TU
 FRUCTOSE
 FUCOSE
 FUMARIC-ACID TU NAP
 FURFUROL
 GALACTINOL
 GALACTOSE
 GERANIOL
 GIBBERELLINS TU NAP
 GLUCINOL TU NAP
 O-ALPHA-D-GLUCOPYRANOSYL-(1-{4-
 O-ALPHA-D-GLUCOPYRANOSYL...TU
 NAP
 GLUCOSE
 ALPHA-GLUCOSIDASE TU NAP
 2-(12-O-BETA-D-GLUCOSYL-11-
 HYDROXY-11-METHYL-ETHYL)-6,10-
 DIMETHYL-SPIRO-4,5)-DEC-6-EN-8-
 ONE 262 TU NAP
 GLUCOSYL-MYOINOSITOL
 GLUTAMIC-ACID 3,470-24,150 TU USA
 EFN26:71
 GLUTAMINE
 GLUTATHIONE
 GLYCINE 620-5,700 TU USA EFN26:71
 GLYOXALIC-ACID
 HEMICELLULOSE
 HEPTADECANOIC-ACID LF NAP
 HEPTADECENEDOIC-ACID LF NAP
 HEPTADECAN-1-OL LF NAP
 N-HEPTANOL
 HEXACOSANOIC-ACID LF NAP
 HEXACOSAN-1-OL LF NAP
 HEXACOSYL-FERULATE TU NAP
 HEXADECANEDIOIC-ACID LF NAP
 HEXADECANOIC-ACID LF NAP
 HEXADECAN-1-OL LF NAP
 HEXADECYL-FERULATE TU NAP
 N-HEXANAL
 HISTIDINE 450-2,140 TU USA
 HYDROGEN-SULFIDE
 3-HYDROXY-2'-CHLORO-N-DEMETHYL-
 DIAZEPAM 20 NG/KG TU NAP
 22-HYDROXY-DOCOSANOIC-ACID LF
 NAP
 26-HYDROXY-HEXACOSANOIC-ACID
 LF NAP
 16-HYDROXY-HEXADECANOIC-ACID
 LF NAP
 HYDROXYMALONIC-ACID
 11-HYDROXY-11-METHYL-ETHYL-6,10-
 DIMETHYL-SPIRO-(4,5)-DEC-6-EN-8-
 ONE 81 TU NAP
 9-HYDROXYNONANOIC-ACID LF NAP
 28-HYDROXY-OCTACOSANOIC-ACID
 LF NAP
 18-HYDROXY-OCTADECANOIC-ACID
 LF NAP
 18-HYDROXY-OCTADECENOIC-ACID
 LF NAP
 24-HYDROXY-TETRACOSANOIC-ACID
 LF NAP
 HYPOXANTHINE
 INVERTASE
 IODINE 0.011
 IRON 5-128 TU AAS USA USG
 ISOBUTYRALDEHYDE EO
 ISODITYROSINE TC NAP
 ISOFRAXIDIN-7-O-BETA-D-GLUCOSIDE
 19 TU NAP
 ISOLEUCINE 840-5,700 TU NAP
 EFN26:71
 ISOLUBIMIN TU NAP
 ISOQUERCITRIN PL PAS
 ISOVALERALDEHYDE EO
 JASMONIC-ACID TU NAP
 KAEMPFEROL FL NAP
 KAEMPFEROL-3-DIGLUCOSIDE-7-
 RHAMNOSIDE
 KAEMPFEROL-3-TRIGLUCOSIDE-7-
 RHAMNOSIDE
 KAEMPFEROL-3-SOPHOROSIDE SD
 KAEMPFEROL-3-SOPHOROSIDE-
 RHAMNOSIDE SD
 KILOCALORIES 780-3,755 TU USA
 EFN26:71
 ALPHA-KETOGLUTARIC-ACID
 LACTIC-ACID
 LAURIC-ACID 30-143 TU USA
 LEAD 0.01-4.2 TU AAS USG
 LECITHINASE
 LEPTINE
 LEUCINE 1,240-7,100 TU NAP EFN26:71
 LIGNOCERYL-FERULATE TU NAP
 LINOLEIC-ACID 320-1,520 TU USA
 LINOLENIC-ACID 100-475 TU USA
 LITHIUM 0.104-0.28 TU USG
 LORMETAZEPAM 0.05-0.1 NG/G TU
 NAP
 LUBIMIN TU NAP
 LUBIMINOL TU NAP
 LUTEIN
 LUTEOLIN FL NAP
 LYCOPHENOL FR

- LYSINE 1,260-6,800 TU NAP EFN26:71
 MAGNESIUM 190-4,250 TU AAS USA
 USG
 MALIC-ACID 1,120 TU JAD NAP
 MALTOTRIOSE
 MANGANESE 1.3-22 TU AAS USA USG
 MANNINOTRIOSE
 MANNOSE
 MELIBIOSE
 MERCURY 0.00026-0.05 TU AAS USG
 METHANETHIOL
 METHIONINE 310-1,568 TU NAP
 EFN26:71
 METHIONINE-SULFOXIDE
 6-(3-METHYL-2-BUTANYL-
 AMINO)PURINE-9-BETA-D-
 RIBOFURANOSIDE TU NAP
 6-(3-METHYL-2-BUTENYL-
 AMINO)PURINE TU NAP
 24-METHYLENECYCLOARTENOL FR
 24-METHYLENELOPHENOL PL JSG
 METHYL-ISOPROPYLKETONE
 MEVALONIC-ACID TU NAP
 MOLYBDENUM <0.1-2.1 TU AAS USG
 MONOHYDROXY-HEXADECANDIOIC-
 ACID LF NAP
 MONOHYDROXY-
 PENTADECANEDIOIC-ACID LF NAP
 MUCILAGE
 MUFA 20-95 TU NAP
 MYOINOSITOL
 MYRICETIN FL NAP
 MYRISTIC-ACID 10-48 TU USA
 NEGRETINE
 NEOCHLOROGENIC-ACID 7 TU NAP
 CIS-NEOXANTHIN
 NIACIN 148-74 TU USA
 NICKEL 0.02-2.6 TU AAS USG
 NICOTINE PL NAP
 NICOTINIC-ACID 12 TU NAP
 NITROGEN 2,200-17,000 TU AAS
 NONACOSANOIC-ACID LF NAP
 NONADECAN-1-OL LF NAP
 NONADECAN-1-OL LF NAP
 NONANEDIOIC-ACID LF NAP
 TRANS-NONEN-2-OL
 NORADRENALIN FR
 NOREPINEPHRINE TU NAP
 OCTADECANOIC-ACID LF NAP
 OCTADECENDIOIC-ACID LF NAP
 OCTADECENOIC-ACID LF NAP
 OCTACOSANOIC-ACID LF NAP
 OCTACOSAN-1-OL LF NAP
 OCTACOSYL-FERULATE TU NAP
 OCTADECYL-FERULATE TU NAP
 N-OCTANAL
 OCTADECADIENOIC-ACID LF NAP
 OCTADECAN-1-OL LF NAP
 OCTEN-1-OL
 TRANS-OCTEN-2-AL
 TRANS-OCTEN-2-OL
 OLEIC-ACID 10-48 TU USA
 OXALIC-ACID 150 TU WBB
 OXYEPILUBIMIN TU NAP
 OXYGLUTINOSONE TU NAP
 OXYLUBIMIN TU NAP
 PAEONANIN
 PALMITIC-ACID 160-760 TU USA
 PALMITOLEIC-ACID 10-48 TU USA
 PANTOTHENIC-ACID 3-18 TU USA
 PATATIN TU NAP
 PECTIN 21,000-73,000 LF
 PECTIN 18,000-33,000 TU
 PENTADECANOIC-ACID LF NAP
 N-PENTANAL
 2-PENTYLFURAN
 PETANIN
 PETUNIDIN-3-RUTINOSIDE
 PHELLOGENIC-ACID LF NAP
 PHENOL-OXIDASE
 PHENYLACETALDEHYDE
 PHENYLALANINE 920-5,550 TU USA
 EFN26:71
 PHOSPHOLIPASE
 PHOSPHORYLASE
 PHOSPHORUS 320-4,200 TU AAS USA
 USG
 PHYTIC-ACID
 PHYTIN
 PHYTOSTEROLS 50-240 TU NAP
 PHYTUBERIN TU NAP
 PLANTEOSE
 POLYPHENOL-OXIDASE
 POTASSIUM 2,470-30,000 (-32,900) TU
 AAS USA USG
 PROLINE 740-6,700 TU NAP EFN26:71
 PROTEIN 10,000-127,000 TU CRC USA
 EFN26:71
 PUFA 430-2,043 TU USA
 PYRIDINE
 QUERCETIN FL NAP
 QUERCITIN-3-GLUCOSIDE
 QUERCITIN-3-GLUCOSYL-
 RHAMNOSIDE FL
 QUERCITIN-3-RUTINOSIDE
 QUINIC-ACID TU NAP
 RAFFINOSE
 RHAMNOSE

RIBOFLAVIN 0.4-1.9 TU USA
 RIBOFURANOSYL-CIS-ZEATIN TU NAP
 RIBOFURANOSYL-TRANS-ZEATIN TU
 NAP
 RIBOSYL-GLUCOSE
 RISBITIN
 RISHITIN 11 TU NAP
 RISHITINOL 9 TU NAP
 RISHITINONE 0.4 TU NAP
 RUBIDIUM 0.64-23 TU AAS
 RUTIN SH NAP
 SCPOLETIN EP(TU) NAP
 SCOPOLIN 98 TU NAP
 SELENIUM 0.0001-0.01 TU AAS USG
 SERINE 90-5,250 TU USA EFN26:71
 SFA 260-1,235 TU USA
 SILICON 1-10 TU AS
 SILVER 0.026-0.07 TU USG
 SINAPIC-ACID 3 TU CRC(FNS)
 BETA-SITOSTEROL PL JSG
 SODIUM 2.6-323 TU USA USG
 ALPHA-SOLAMARINE
 BETA-SOLAMARINE
 SOLAMINE SP NAP
 SOLANESOL LF
 SOLANIDINE TU NAP
 SOLANIDINE-T PL JSG
 SOLANINE 10,000 FR
 SOLANINE 6,000-7,000 LF
 SOLANINE 600 TC NAP
 ALPHA-SOLANINE 5-125,100 TU NAP
 SOLANINES 20-100 TU
 SOLANOLONE 2.2 TU NAP
 SOLANTHRENE TU NAP
 SOLASODINE TU NAP
 SOLAVETIVONE 6-83 TU CCO NAP
 SPIROVETIVA-1(10),11,DIEN-2-ONE TU
 NAP
 SPIROVETIVA-1(10),3,11,TRIEN-2-ONE
 TU CCO NAP
 STACHYOSE
 STARCH 150,000-800,000 TU
 STEARIC-ACID 40-190 TU USA
 STIGMASTEROL
 STRONTIUM 0.39-60 TU USG
 SUBERIN TU NAP
 SUCCINIC-ACID
 SULFUR 16-1,900 TU AAS USG
 TANNIN 32,000 LF
 TARTARIC-ACID
 TETRACOSANEDIOIC-ACID LF NAP
 TETRACOSANOIC-ACID LF NAP
 TETRACOSAN-1-OL LF NAP
 TETRADECANOIC-ACID LF NAP

THIAMIN 1-5 TU CRC USA
 THREONINE 750-4,300 TU NAP
 EFN26:71
 TITANIUM 0.13-17 TU USG
 ALPHA-TOCOPHEROL 0.5-2.8 TU USA
 TOLATID-5-EN-3BETA-OL PL JSG
 TOMATIDINE TU NAP
 TOMATINE TU NAP
 TRIACONTANOIC-ACID LF NAP
 TRIACONTAN-1-OL LF NAP
 TRIGALACTOSYL-GLYCEROL
 TRIGONELLINE
 9,10,18-TRIHIDROXY-OCTADECANOIC-
 ACID LF NAP
 9,10,18-TRIHIDROXY-OCTADECENOIC-
 ACID LF NAP
 TRITRIACONTANONE
 TRYPTOPHAN 320-2,250 TU USA
 EFN26:71
 TUBERONIC-ACID-5'-O-BETA-D-
 GLUCOSIDE 0.027 LF NAP
 TUBEROSIN
 TYRAMINE FR
 TYROSINE 770-3,900 TU USA EFN26:71
 TYROSINASE
 UMBELLIFERONE TU NAP
 VALINE 117-6,450 TU NAP EFN26:71
 CIS-VIOLAXANTHIN
 VIT-B6 2.5-12.5 TU USA
 WATER 700,000-800,000 TU AAS CRC
 USA
 XYLOSYL-GLUCOSE
 YAMOGENIN CCO
 TRANS-ZEATIN TI NAP
 ZINC 1.9-44.1 TU AAS USA USG
 ZIRCONIUM 0.52-1.4

AAS=ACTA AGRIC SCAND SUPPL 22;
 H2O=80%; ZMB=5 X APB

SOLIDAGO VIRGAUREA L.

"EUROPEAN GOLDENROD"
 "WOUNDWORT"

ASTRAGALIN LF CRC
 CAFFEIC-ACID FL CRC
 CATECHIN-TANNINS PL CRC
 CHLOROGENIC-ACID FL CRC
 CLERODANE-DITERPENES LF 411/
 CYANIDIN-3-GLUCOSYLGLUCOSIDE
 FL CRC
 ELONGATOLIDES LF 411/
 HYDROXYCINNAMIC-ACID FL CRC
 INULIN RT CRC

ISOQUERCITRIN FL CRC
 KAEMPFEROL-RHAMNOSIDE LF CRC
 KAEMPFEROL-RHAMNOGLUCOSIDE
 FL CRC
 LEICARPOSIDE PL 411/
 MATRICARIAESTER 8,000 RT CRC
 POLYGALIC-ACID LF 411/
 QUERCETIN LF CRC
 QUERCITRIN LF CRC
 QUINIC-ACID FL CRC
 RUTIN LF CRC
 SOLIDAGOLACTONES LF 411/
 VIRGAUREAGENINS PL JSG

***SONCHUS OLERACEUS* L.**

"CERRAJA"

"SOW THISTLE"

APIGENIN-7-GLUCURONIDE PL RIZ
 ASCORBIC-ACID 50-625 LF CRC
 ASH 16,000-235,000 LF CRC PAN
 CALCIUM 1,310-19,265 LF CRC PAN
 CAOUTCHOUC 1,440 ST RIZ
 CARBOHYDRATES 30,000-488,000 LF
 CRC PAN
 BETA-CAROTENE 14-545 LF CRC
 FAT 3,000-44,000 LF CRC PAN
 FIBER 4,000-59,000 LF CRC PAN
 IRON 31-455 LF CRC PAN
 KILOCALORIES 180-2,650 LF CRC PAN
 LUTEOLIN-7-GLUCOSIDE PL RIZ
 LUTEOLIN-7-GLUCOSYLGLUCURONIDE
 PL RIZ
 LUTEOLIN-7-GLUCURONIDE PL RIZ
 NIACIN 8-118 LF CRC PAN
 PHOSPHORUS 370-5,440 LF CRC PAN
 PROTEIN 19,000-300,000 LF CRC PAN
 RIBOFLAVIN 1-16 LF CRC PAN
 SCOPOLETIN PL RIZ
 TARAXASTEROL PL RIZ
 THIAMIN 0.7-19 LF CRC
 WATER 920,000-932,000 LF CRC

***SOPHORA ANGUSTIFOLIA* AIT.**

"NARROWLEAF SOPHORA"

ANAGYRINE RT CCO
 ARSENIC 0.49 RT CAL
 BAPTIFOLINE RT CCO
 CALCIUM 8,750-9,710 RT CAL SMO
 CAMPESTEROL RT CCO
 COPPER 5-10 RT CAL SMO

CYTISINE SD ALK
 FORMONONETIN RT CCO
 IRON 280-860 RT CAL SMO
 ISOANHYDROICARITIN RT CCO
 ISOKURARINONE RT CCO
 ISOMATRINE RT CCO
 8-ISOPENTYL-RHAMNOCITRIN RT CCO
 ISOXANTHOTHUMOL RT CCO
 KURARIDIN RT CCO
 KURADINOL RT CCO
 KURARIDINOL RT CCO
 KURARINOL RT CCO
 KURARINONE RT CCO
 MAGNESIUM 2,140-3,720 RT CAL SMO
 MANGANESE 28-42 RT CAL SMO
 MATRINE RT CCO
 MERCURY 0.27 RT CAL
 L-N-METHYLCYTISINE RT CCO
 NEOKURARINONE RT CCO
 NORANHYDROICARITIN RT CCO
 NORKURARINONE RT CCO
 OXYMATRINE RT CCO
 POTASSIUM 2,430-4,740 RT CAL SMO
 SODIUM 70-74 RT CAL SMO
 SOPHOCARPINE RT CCO
 SOPHOCARPINE-N-OXIDE
 SOPHORAMINE RT CCO
 SOPHORANOL RT CCO
 STIGMASTEROL RT CCO
 XANTHOTHUMOL RT CCO
 ZINC 10-24 RT CAL SMO

***SOPHORA JAPONICA* L.**

"JAPANESE PAGODA TREE"

AMHYDROPISATIN RT HHB
 ASCORBIC-ACID 470 LF HHB
 ASH 39,000 SD CRC
 BETULIN FL HHB
 BIOCHANIN-A PL JSG
 BIOCHANIN-A-7-BETA-D-
 GENTIOBIOSIDE WD CCO
 BIOCHANIN-A-7-(BETA-D-XYLOSYL
 {1-6}-BETA-D-GLUCOSIDE) WD CCO
 CAFFEIC-ACID PL JLS58:132
 CALCIUM 2,649 SD CRC
 CARBOHYDRATES 668,000 SD CRC
 P-COUMARIC-ACID PL JLS58:132
 CYTISINE SD HHB
 5,7-DIHYDROXY-3',4'-METHYLENE-
 DIOXYISOFLAVONE RT CCO
 FAT 69,000-121,000 SD CRC
 FERULIC-ACID PL JLS58:132

FIBER 99,000 SD CRC
 GALACTOMANNAN SD HHB
 GENISTEIN PL HHB
 IRISOLIDINE WD CCO
 IRISOLIDINE-7-O-GLUCOSIDE PL
 JSG
 KAEMPFEROL PL HHB
 KAEMPFEROL-C-GLYCOSIDE PL HHB
 LINOLEIC-ACID 36,570-64,130 SD CCO
 CRC
 LINOLENIC-ACID 8,280-14,520 SD CCO
 CRC
 MAACKIAIN RT HHB
 D-MAACKIAIN RT CCO
 (D,L)-MAACKIAIN RT CCO
 L-MAACKIAIN RT CCO
 MATRINE SD HHB
 (+)-MEDICARPIN PL JSG
 N-METHYL-CYTISINE SD HHB
 NEOHESPERIDOSE FR HHB
 OLEIC-ACID 15,385-26,980 SD CCO
 CRC
 PHOSPHORUS 2,723 SD CRC
 POTASSIUM 10,660 SD CRC
 PRATENSEIN WD CCO
 PROTEIN 182,000 LF WOI
 PROTEIN 172,000-230,000 SD CRC
 PTEROCARPANE RT HHB
 QUERCETIN PL JLS58:132
 QUERCETRIN PL CCO
 RUTIN 128,000-140,000 FL HHB
 FT60:182
 RUTIN 176,000-229,000 FL BD HHB
 FT60:182
 RUTIN 0-25,000 FR HHB FT60:182
 RUTIN 0-40,000 LF HHB FT60:182
 SINAPIC-ACID PL JLS58:132
 SISOETRIN WD CCO
 BETA-SITOSTEROL PL JSG
 SOPHAROL(SIC) PL JSG
 SOPHOCARNINE SD HHB
 SOPHOCARPINE PL JSG
 SOPHOJAPONICIN RT CCO
 SOPHORABIOSE FR HHB
 SOPHORABIOSIDE 800 FR HHB
 SOPHORADIOL FL HHB
 SOPHORAFLAVONOLOSIDE 6,000 FR
 HHB
 SOPHORICOSIDE 20,000 FR HHB
 SOPHORIN FR HHB
 STIZOLAMINE SD CCO
 5,7,4'-TRIHYDROXY-ISOFALVONE-4'-
 BETA-NEOHESPERIDOSIDE FR HHB

SOPHORA PACHYCARPA
 SCHRENK.

“SIBERIAN PACHYCARPA”

ANABASINE SD HHB
 CITRIC-ACID PL HHB
 CYSTINE SD ALK
 FUMARIC-ACID LF HHB
 GOEBELINE PL ALK
 LACTIC-ACID LF HHB
 MALIC-ACID LF HHB
 MATRINE SD HHB
 MATRINE-N-OXIDE SD ALK
 OXALIC-ACID LF HHB
 OXYMATRINE PL HHB
 PACHYCARPIDINE SD HHB
 PACHYCARPINE SD HHB
 BETA-SITOSTEROL PL HHB
 SOPHOCARPIDINE SD HHB
 SOPHOCARPINE SD HHB
 SOPHORAMINE SD HHB
 (+)-SPARTEINE SD HHB
 SUCCINIC-ACID LF HHB
 TARTARIC-ACID LF HHB
 TOCOPHEROL PL HHB

SOPHORA SECUNDIFLORA
 (ORTEGA) LAG.

“MESCAL BEAN”

11-ALLYL-CYTISINE PL JSG
 ASH 32,000 SD CRC
 CALCIUM 500-1,900 SD CRC
 CARBOHYDRATES 731,000-780,000 SD
 CRC
 CYTISINE SD CRC
 FAT 134,000-252,000 SD CRC
 FIBER 151,000-311,000 SD CRC
 N-METHYL-CYTISINE PL JSG
 PHOSPHORUS 140 SD CRC
 POTASSIUM 1,150 SD CRC
 PROTEIN 156,000-224,000 SD CRC
 SPARTEINE PL JSG
 UNANISOFLAVONE PL JSG

SOPHORA SUBPROSTRATA
 CHUN & CHEN

“SHAN DOU GEN”

ANAGYRINE RT CCO
 ARSENIC 0.23 RT CAL

CALCIUM 18,600 RT CAL
 COPPER 5 RT CAL
 DAIDZEIN RT CCO
 4',7-DIHYDROXY-6,8-BIS(3-METHYL-2-BUTENYL)-FLAVANONE RT CCO
 GENISTEIN RT CCO
 IRON 130 RT CAL
 LUPEOL RT CCO
 L-MAACKIAIN RT CCO
 MAGNESIUM 1,880 RT CAL
 MANGANESE 14 RT CAL
 MATRINE RT CCO
 D-MATRINE-N-OXIDE RT CCO
 MERCURY 0.11 RT CAL
 METHYLCYTISINE RT CCO
 OXYMATRINE RT CCO
 POTASSIUM 820 RT CAL
 L-PTEROCARPIN RT CCO
 SODIUM 76 RT CAL
 SOPHORADIN RT CCO
 SOPHARADOCHROMENE RT CCO
 SOPHARANOCHROMENE RT CCO
 SOPHORANONE RT CCO
 TRANS-CAFFEIC-ACID-DOCOSYL-ESTER RT CCO
 TRIFOLIRHIZIN RT CCO
 TRIFOLIRHIZIN-6'-MONOACETATE RT CCO
 ZINC 14 RT CAL

SORBUS AUCUBARIA L.

“ROWAN BERRY”

ALUMINUM 2-75 FR AAS
 AMYGDALIN 343-617 FR WOI
 AMYGDALIN SD HHB
 ARSENIC 0.01-0.04 FR AAS
 ASCORBIC-ACID 39-2,650 FR HHB WOI
 ASH 7,300-57,690 FR AAS
 ASH 6,300 WD WOI
 ASOZONE FR HHB
 BORON 4-24 FR AAS
 BROMINE 1-4 FR AAS
 CADMIUM 0.005-0.04 FR AAS
 CAFFEIC-ACID FR HHB
 CALCIUM 100-2,115 FR AAS
 BETA-CAROTENE 62-98
 CELLULOSE 464,400 WD WOI
 CHLOROGENIC-ACID FR HHB
 CHROMIUM 0.02-0.19 FR AAS
 CINNAMIC-ACID FR HHB
 CITRIC-ACID FR HHB
 COBALT 0.005-0.08 FR AAS
 COPPER 0.8-4 FR AAS

P-COUMARIC-ACID PL JLS58:129
 CRYPTOXANTHIN FR HHB
 CYANIDIN PL JLS58:129
 EPICATECHIN FR HHB
 EPICATECHIN-GALLATE FR HHB
 FAT 210,000 SD HHB
 FLUORINE 0.2-1.5 FR AAS
 GALLIC-ACID FR HHB
 GLUCOSE FR HHB
 HCN 20-37 FR WOI
 HEMICELLULOSE 334,800 WD WOI
 IRON 7-58 FR AAS
 ISOCHLOROGENIC-ACID FR HHB
 ISOQUERCITRIN FR HHB
 KAEMPFEROL-3-GLUCOSIDE LF HHB
 KAEMPFEROL-3-BETA-SOPHOROSIDE LF HHB
 LEAD 0.1-3 FR AAS
 LECITHIN FR HHB
 LIGNIN 464,400 WD WOI
 MAGNESIUM 190-1,190 FR AAS
 MALIC-ACID 19,000-39,000 FR WOI
 MANGANESE 12-75 FR AAS
 MERCURY 0.001-0.011 FR AAS
 METHYL-PENTOSANE LF HHB
 MOLYBDENUM <0.1 FR AAS
 NEOCHLOROGENIC-ACID FR HHB
 NICKEL 0.1-0.4 FR AAS
 NITROGEN 2,100-11,900 FR AAS
 PARASORBIC-ACID 400 FR HHB
 PARASORBOSIDE FR HHB
 PECTIN 10,000 FR HHB
 PENTOSANS 295,300 WD WOI
 PHLOROGLUCINOL FR HHB
 PHOSPHORUS 360-1,880 FR AAS
 POTASSIUM 2,900-13,075 FR AAS
 PROTOCATECHUIC-ACID FR HHB
 QUERCETIN FR HHB
 QUERCETIN-3-GALACTOSIDE LF HHB
 QUERCETIN-3-BETA-SOPHOROSIDE LF HHB
 QUINIC-ACID FR HHB
 RUBIDIUM 3-33 FR AAS
 RUTIN FR HHB
 SELENIUM 0.001-0.011 FR AAS
 SILICON 20-190 FR AAS
 BETA-SITOSTEROL FL HHB
 SORBIC-ACID FR HHB
 SORBICORTOLS PL JSG
 SORBITOL FR HHB
 SORBOSE FR HHB
 SUCCINIC-ACID FR HHB
 SUGARS 31,000-80,000 FR HHB WOI
 TANNINS 44,700 BK WOI

TANNINS 4,000-6,000 FR HHB
 TARTARIC-ACID FR HHB
 TOCOPHEROL FR HHB
 TRIMETHYLAMINE FL HHB
 URSOLIC-ACID FR HHB
 WATER 740,000 FR AAS
 ZINC 1-18 FR AAS

AAS=ACTA AGRIC SCAND SUPPL 22:
 1980 H20=74% ZMB= 3.85 X APB

SPARTIUM JUNCEUM L.

“GENET; SPANISH BROOM;
 WEAVER’S BROOM”

ASH 44,000 ST CRC
 BETA-AMYRIN FL HHB
 ANAGYRINE FL HHB
 CAFFEIC-ACID HHB
 CALCIUM 6,500 ST WOI
 CAPRYLIC-ACID FL WOI
 CARBOHYDRATES 403-000-800,000 ST
 CRC WOI
 CHRYSIN PL JSG
 CHRYSIN-7-GENTIOBIOSIDE PL JSG
 CHRYSIN-7-BETA-D-
 GLUCOPYRANOSIDE PL JSG
 CYTISINE FL AYL 6,300 FR WOI
 CYTISINE-11-OXIDE FL HHB
 FAT 100,000-124,000 SD CRC HHB
 FAT 46,000 ST CRC
 FIBER 397,000 ST CRC
 1,26-HEXACOSANEDIOL FL AYL
 JUNCIN FL WOI
 LINOLEIC-ACID 68,800-8,5312 SD WOI
 LINOLENIC-ACID SD WOI
 LUPEOL FL AYL
 LUTEOLIN-4'-GLUCOSIDE FL AYL
 LUTEOLIN-7-GLUCOSIDE FL AYL
 N-METHYLCYTISINE FL AYL
 MYRISTIC-ACID SD WOI
 N-NONACOSANE FL AYL
 1,18-OCTADECANEDIOL FL AYL
 OLEIC-ACID SD WOI
 ORIENTIN FL HHB
 PALMITIC-ACID SD WOI
 PHOSPHORUS 2,600 ST WOI
 PROTEIN 300,000-378,000 SD CRC
 PROTEIN 110,000 DT WOI
 QUERCETIN HHB
 SCOPARIN FL WOI
 SITOSTEROL FL AYL
 SPARTEINE FL AYL

STEARIC-ACID SD WOI
 THERMOPSINE FL AYL

SPHENOSTYLIS STENOCARPA (HOCHST. EX A. RICH) HARMS “YAM PEA; AFRICAN YAM BEAN”

ASH 8,000-23,000 RT CRC
 ASH 29,000-32,000 SD CRC
 CALCIUM 100-284 RT CRC
 CALCIUM 550-607 SD CRC
 CARBOHYDRATES 304,000-864,000 RT
 CRC
 CARBOHYDRATES 674,000-744,000 SD
 CRC
 FAT 2,000-6,000 RT CRC
 FAT 11,000-12,000 SD CRC
 FIBER 4,000-11,000 RT CRC
 FIBER 52,000-57,000 SD CRC
 KILOCALORIES 1,290-3,660 RT CRC
 KILOCALORIES 3,500-3,860 SD CRC
 PHOSPHORUS 800-2,273 RT CRC
 PHOSPHORUS 3,980-4,393 SD CRC
 PROTEIN 38,000-108,000 RT CRC
 PROTEIN 192,000-212,000 SD CRC
 THIAMIN 6.9-7.6 SD CRC
 WATER 648,000 RT CRC
 WATER 94,000 SD CRC

SPIGELIA MARILANDICA L.

“INDIAN PINK”
 “PINKROOT”

LIGNIN PL CRC
 MUCILAGE PL CRC
 MYRICIN PL CRC
 SPIGELEINE PL 411/
 SPIGELINE PL CRC
 TANNIN PL

SPINACIA OLERACEA L.

“SPINACH”

ACETYLCHOLINE LF WOI
 N-ACETYLHISTAMINE LF WOI
 ALANINE 1,420-16,864 PL USA
 ALUMINUM 5-270 LF AAS
 ARGININE 1,620-19,239 PL USA
 ARSENIC 0.02-0.29 LF AAS
 ASCORBATE 212-4,450 PL PCO
 ASCORBIC-ACID 239-7,595 PL USA WOI
 ASH 16,850-285,700 PL AAS USA
 ASPARTIC-ACID 2,400-28,502 PL USA

- BORON 2.4-40 LF AAS
 BROMINE 4 LF AAS
 CADMIUM 0.05-5 LF AAS
 CALCIUM 730-15,700 PL AAS USA WOI
 CARBOHYDRATES 35,000-415,660 PL USA
 BETA-CAROTENE 4-690 PL PCO USA
 CEPHALIN LF WOI
 CHLORINE 5,40-6,835 PL WOI
 CHOLESTEROL LF WOI
 CHROMIUM 0.01-0.42 FL AAS
 COBALT 0.001-1.2 PL AAS WOI
 COLAMINE LF WOI
 COPPER 0.1-24 PL AAS USA WOI
 P-COUMARIC-ACID 133 LF CRC(FNS)
 CYSTINE 350-4,157 PL USA
 DIGALACTOSYLDIACYLGLYCEROL PL PCO
 N,N-DIMETHYLHISTAMINE LF WOI
 FAT 3,070-46,672 PL USA
 FERULIC-ACID 16 LF CRC(FNS)
 FIBER 6,000-111,634 PL USA WOI
 FLUORINE 0.3-5.7 LF AAS
 FOLACIN 1.59-27.13 PL USA
 FOLIC-ACID 1.2-15 PL WOI
 GLUTAMIC-ACID 3,430-40,735 PL USA
 GLUTATHIONE 90-1,065 PL PCO
 GLYCINE 1,340-15,914 PL USA
 HEXADECA-7,10,13-TRIENOIC-ACID LF WOI
 HEXOSAMINE 380 SD WOI
 HISTIDINE 640-7,601 PL USA
 6-(HYDROXYMETHYL)-LUMAZINE LF WOI
 3-HYDROXYTYRAMINE LF WOI
 IODINE 0.2 PL WOI
 IRON 8-384 PL AAS USA
 ISOLEUCINE 1,470-17,458 PL USA
 KAEMPFEROL PL JLS58:120
 KILOCALORIES 220-2,613 PL USA
 LEAD 0.03-3 LF AAS
 LECITHIN LF WOI
 LEUCINE 2,230-26,483 PL USA
 LINOLEIC-ACID 104-2,613 PL PCO USA
 ALPHA-LINOLENIC-ACID 480-13,657 PL PCO USA
 LYSINE 1,740-20,664 PL USA
 MAGNESIUM 420-11,000 PL AAS USA WOI
 MANGANESE 3-485 PL AAS USA WOI
 MERCURY 0.003-0.11 LF AAS
 METHIONINE 530-6,294 PL USA
 MOLYBDENUM 0.06-0.8 PL WOI
 MONOGALACTOSYLDIACYLGLYCEROL PL PCO
 MYRISTIC-ACID 1-950 PL PCO USA
 NIACIN 6.9-89.8 PL USA
 NICKEL 0.05-5.7 PL AAS WOI
 NITROGEN 3,200-45,700 LF AAS
 OLEIC-ACID 18-475 PL PCO USA
 OXALIC-ACID 6,580 (-86,700) LF WOI
 PALMITIC-ACID 106-4,869 PL PCO USA
 PALMITOLEIC-ACID 21-475 PL PCO USA
 PANTOTHENIC-ACID 0.57-8.7 PL USA
 PATULETIN LF WOI
 PHENYLALANINE 1,290-15,320 PL USA
 PHOSPHATIDYLCHOLINE PL PCO
 PHOSPHATIDYLETHANOLAMINE PL PCO
 PHOSPHATIDYLGLYCEROL LF PCO
 PHOSPHATIDYLINOSITOL LF PCO
 PHOSPHATIDYLSERINE LF PCO
 PHOSPHORUS 250-6,232 PL AAS USA
 PHYTOSTEROLS 90-1,800 PL USA WOI
 POLYPHENOL-OXIDASE LF WOI
 POTASSIUM 2,060-69,077 PL USA WOI
 PROLINE 1,120-13,301 PL USA
 PROTEIN 27,480-352,954 PL USA
 QUERCETIN 19 LF WOI
 RIBOFLAVIN 1.8-23.4 PL USA
 RUBIDIUM 0.9-90 LF AAS
 RUTIN 170 LF WOI
 SELENIUM 0.0004-0.057 LF AAS
 SERINE 1,040-12,351 PL USA
 SILICON 1-855 LF AAS
 SODIUM 585-10,669 PL USA WOI
 SPINASAPONINS PL JSG
 SPINASTEROL LF WOI
 STEARIC-ACID 7-356 PL PCO USA
 7-STIGMASTEROL LF WOI
 STRONTIUM 0.06-0.77 PL WOI
 SULFOLIPIDS PL PCO
 SULFUR 270-5,700 PL AAS WOI
 THIAMIN 0.7-10.2 PL USA
 THREONINE 1,220-14,489 PL USA
 ALPHA-TOCOPHEROL 12-419 LF CCG PCO TOT
 TRIMETHYLHISTAMINE LF WOI
 TRYPTOPHAN 390-4,632 PL USA
 TYROSINE 1,080-12,826 PL USA
 VALINE 1,610-19,120 PL USA
 VIT-B6 1.9-24 PL USA
 WATER 913,120-930,000 PL AAS USA
 ZINC 4-185 PL AAS USA WOI

PCO= personal communication, Dr. H.
Norman. 1/AAS=Acta Agric. Scand.
Suppl. 11; H₂O=93%; ZMB calculated
multiplying APB X 14.28

SPIRULINA PRATENSIS
(AN ALGA)

"SPIRULINA"

ASCORBIC-ACID TR PL PED
ASH 182,000 PL PED
CALCIUM 280 PL PED
CARBOHYDRATES 245,000 PL PED
BETA-CAROTENE 478 PL PED
FAT 21,000 PL PED
FIBER 2,000 PL PED
IRON 713 PL PED
KILOCALORIES 3,800 PL PED
MAGNESIUM 2,550 PL PED
NIACIN 160 PL PED
PHOSPHORUS 3,190 PL PED
POTASSIUM 1,600 PL PED
PROTEIN 713,000 PL PED
RIBOFLAVIN 46 PL PED
SODIUM 128 PL PED
THIAMIN 51 PL PED

SPONDIAS DULCIS FORST.

"AMBARELLA"

ALUMINUM 10-11 FR ABS
L-ARABINOSE RE WOI
ASCORBIC-ACID 360-2,750 FR CRC
ASH 4,000-31,000 FR CRC
BORON 1.9 FR ABS
CALCIUM 560-4,275 FR CRC
CALCIUM 5,000 SD ABS
CARBOHYDRATES 116,000-947,000 FR
CRC
BETA-CAROTENE 2-16 FR CRC
COPPER 0.9 FR ABS
FAT 1,000-8,000 FR CRC
FIBER 11,000-84,000 FR CRC
L-FUCOSE RE WOI
D-GALACTOSE RE WOI
IRON 3-23 FR CRC
KILOCALORIES 460-3,510 FR CRC
MAGNESIUM 48-240 FR ABS
MAGNESIUM 1,200 SD ABS
MANGANESE 1.2 FR ABS
MONO-METHYL-GLUCURONIC-ACID
RE WOI
NIACIN 14-105 FR CRC

NITROGEN 16,900-17,900 FR ABS
NITROGEN 6,200 SD ABS
PECTIN 97,600 FR WOI
PHOSPHORUS 670-5,115 FR CRC
PHOSPHORUS 700 SD ABS
POTASSIUM 950-20,700 FR ABS CRC
POTASSIUM 5,800 SD ABS
PROTEIN 2,000-15,000 FR CRC
L-RHAMNOSE RE WOI
RIBOFLAVIN 0.2-1.5 FR CRC
SODIUM 10-75 FR CRC
SUCROSE 80,500-200,000 FR WOI
SULFUR 36-180 FR ABS
SULFUR 900 SD ABS
THIAMIN 0.5-4 FR CRC
WATER 596,000-869,000 FR CRC
D-XYLOSE RE WOI
ZINC 1.9 FR ABS

SPONDIAS MOMBIN L.

"YELLOW PLUM"

"YELLOW MOMBIN"

ASCORBIC-ACID 160-1,615 FR CRC
ASH 4,000-35,000 FR CRC
CALCIUM 260-2,500 FR CRC
CARBOHYDRATES 106,000-883,000 FR
CRC
BETA-CAROTENE 1-115 FR CRC
FAT 2,000-121,000 FR CRC
FIBER 5,000-58,000 FR CRC
IRON 10-127 FR CRC
KILOCALORIES 420-4,050 FR CRC
NIACIN 5-117 FR CRC
PHOSPHORUS 310-3,250 FR CRC
POTASSIUM FR CRC
PROTEIN 8,000-67,000 FR CRC
RIBOFLAVIN 0.3-3.5 FR CRC
SODIUM FR CRC
TARTARIC-ACID 15,000 FR WOI
THIAMIN 0.4-4.5 FR CRC
WATER 827,000-880,000 FR CRC

SPONDIAS PINNATA L.

"YELLOW PLUM"

"YELLOW MOMBIN"

ASCORBIC-ACID 210-2,165 FR CRC
ASH 5,000-52,000 FR CRC
CALCIUM 360-3,710 FR CRC
CARBOHYDRATES 55,000-567,000 FR
CRC
BETA-CAROTENE 2-28 FR CRC

ELLAGITANNINS LF PC30:1129 antiviral
 FAT 30,000-309,000 FR CRC
 FIBER 10,000-103,000 FR CRC
 FRUCTOSE 18,000 FR WOI
 GALLOYLGERANIIN LF PC30:1129
 antiviral
 GERANIIN LF PC30:1129 antiviral
 GLUCOSE 17,000 FR WOI
 IODINE 0.04-0.61 FR WOI
 IRON 39-400 FR CRC
 KILOCALORIES 218-4,810 FR CRC JFM
 NIACIN 3-31 FR CRC
 PHOSPHORUS 110-1,135 FR CRC
 POTASSIUM FR CRC
 PROTEIN 7,000-72,000 FR CRC
 RIBOFLAVIN 0.2-2.1 FR CRC
 SODIUM FR CRC
 SUCROSE 29,000 FR WOI
 THIAMIN 0.2-2.1 FR CRC
 WATER 903,000 FR CRC

SPONDIAS PURPUREA L.

“PURPLE PLUM”

“PURPLE JOBO”

ASCORBIC-ACID 450-2,025 FR CRC
 ASH 6,000-34,000 FR CRC
 CALCIUM 140-925 FR CRC
 CARBOHYDRATES 220,000-924,000 FR
 CRC
 BETA-CAROTENE 0.6-9 FR CRC
 FAT 1,000-12,000 FR CRC
 FIBER 4,000-21,000 FR CRC
 IRON 6-37 FR CRC
 KILOCALORIES 830-3,550 FR CRC
 NIACIN 4-42 FR CRC
 PHOSPHORUS 350-1,680 FR CRC
 POTASSIUM 2,700-11,155 FR CRC
 PROTEIN 9,000-41,000 FR CRC
 RIBOFLAVIN 0.3-2.1 FR CRC
 SODIUM 20-83 FR CRC
 THIAMIN 0.7-3.7 FR CRC
 WATER 758,000-762,000 FR CRC

SPONDIAS TUBEROSA ARRUDA

“IMBU”

“UMBU”

ALUMINUM 7.88 FR ABS
 BORON 1.45 FR ABS
 CALCIUM 200 FR ABS
 COPPER 0.63 FR ABS
 IRON 7 FR ABS

MAGNESIUM 90 FR ABS
 MANGANESE 0.95 FR ABS
 NITROGEN 1,100 FR ABS
 PHOSPHORUS 210 FR ABS
 POTASSIUM 16,700 FR ABS
 SODIUM 11.1 FR ABS
 SULFUR 120 FR ABS
 ZINC 1.33 FR ABS

STACHYS GERMANICA L.

“DOWNY WOUNDWORT”

1,8-CINEOLE 48 PL BML
 P-CYME NE 13 PL BML
 EO 800 PL BML
 TRANS-BETA-FARNESENE 56 PL BML
 GERMACRENE-D 43 PL BML
 LIMONENE 18 PL BML
 MYRCENE 7 PL BML
 CIS-OCIMENE 65 PL BML
 ALPHA-PINENE 67 PL BML
 SABINENE 14 PL BML
 ALPHA-TERPINEOL 6 PL BML

STACHYS OFFICINALIS (L.)

TREVISAN

“BETONY”

ACHILLEIN PL CRC
 BETAINE 5,000 PL CRC
 BETONICIN PL CRC
 CAFFEIC-ACID 5,000 PL CRC
 4-CAFFEYOYLQUINIC-ACID PL HHB
 CHLOROGENIC-ACID PL CRC
 CHOLINE PL CRC
 HARPAGIDE PL CRC
 NEOCHLOROGENIC-ACID PL CRC
 (-)-OXYSTACHYDRINE PL CRC
 (+)-OXYSTACHYDRINE PL CRC
 ROSMARINIC-ACID PL CRC
 STACHYDRINE PL CRC
 TANNIN 150,000 PL CRC
 TURICINE PL CRC

STACHYTARPHETA

CAYENNENSIS VAHL

“VERBENA”

CITRAL PL JFM
 EO 350-700 PL JFM
 GERANIOL PL JFM
 SALICYLIC-ACID PL JFM

STACHYTARPHETA JAMAICENSIS
VAHL

“BRAZILIAN TEA”

APIGENOL-7-GLUCURONIDE PL JSG
CHLOROGENIC-ACID PL JSG
DOPAMINE PL WOI
6-HYDROXYLUTEOL-7-GLUCURONIDE PL JSG
LUTEOL-7-GLUCURONIDE PL JSG
STACHYTARPHINE PL HHB
TARPHETALIN PL JSG

STELLARIA MEDIA (L.) VILLARS

“CHICKWEED”

ALUMINUM 1,960 PL PED 1/
ASCORBIC-ACID 69-5,500 PL 411/ CRC
PED WOI
ASH 16,000-193,000 PL CRC PED
CALCIUM 12,100 PL PED
CALCIUM-OXIDE 18,480 PL WOI
CARBOHYDRATES 53,000-639,000 PL
CRC PED
CARBONIC-ANHYDRASE LF WOI
BETA-CAROTENE 43-325 PL CRC PED
CERYLCEROTATE PL HHB
CHLORINE 12,936 PL WOI
CHROMIUM 11 PL PED
COBALT 121 PL PED
EO 1,000-2,000 PL PED
FAT 2,000-48,000 PL CRC PED
FAT 48,000-59,000 SD CRC WOI
FIBER 17,000-205,000 PL CRC PED
HENTRIACONTANOL PL HHB
IRON 2,530 PL PED
IRON-(FE₂O₃) 3,432 PL WOI
KILOCALORIES 2,130 PL PED
LINOLEIC-ACID PL PED
GAMMA-LINOLENIC-ACID PL HHB
MAGNESIUM 5,290 PL PED
MAGNESIUM-OXIDE 28,776 PL WOI
MANGANESE 153 PL PED
MUCILAGE 70,000-120,000 PL PED
NIACIN 5-47 PL CRC PED
OCTADECATETRAENIC-ACID PL HHB
OLEIC-ACID PL PED
PALMITIC-ACID PL PED
PHOSPHORUS 4,480 PL PED
PHOSPHORUS-OXIDE 9,240 PL WOI
POTASSIUM 18,400 PL PED
POTASSIUM-OXIDE-(K₂O) 48,312 PL
WOI

PROTEIN 12,000-217,000 PL CRC PED
PROTEIN 178,000 SD CRC
RIBOFLAVIN 1.3-1.4 PL CRC PED
RUTIN PL HHB
SELENIUM 4.3 PL PED
SILICON 157 PL PED
SILICON-(SiO₂) 4,752 PL WOI
SODIUM 1,470 PL PED
SODIUM-OXIDE 9,108 PL WOI
STARCH 15,300 RT HHB
STEARIC-ACID PL PED
SULFUR 3,828 PL WOI
THIAMIN 0.2-2.1 PL CRC PED
TIN TR PL PED
TOCOPHEROLS 440 PL WOI
WATER 917,000 PL CRC
ZINC 52 PL PED

STEPHANIA GLABRA MIERS

“INDIAN TAPE-VINE”

ALKALOIDS 60,000-75,000 RT WOI
ALKALOIDS 10,000 ST WOI
COLUMBAMINE RT ALK
(-)-CORYDALMINE PL WOI
CYCLEANINE RT ALK
DEHYDROCORYDALMINE RT ALK
N-DEMETHYCYCLEANINE PL JSG
GINDARICINE RT ALK
GINDARINE RT ALK
GINDARININE RT ALK
HYNDARINE RT ALK
JATRRORRHIZINE RT ALK
MAGNOFLORINE RT ALK
N-METHYLHYDOXYSTEPHARINE RT
ALK
N-METHYLOXYSTEPHANINE RT ALK
PALMATINE RT ALK
(+)-PRONUCIFERINE PL WOI
REMERINE PL HHB
ROTUNDINE RT ALK
STEPHARANINE RT ALK
STEPHARARINE RT ALK
STEPHARINE RT HHB
(-)-STEPHOLIDINE RT HHB
TETRAHYDROPALMATINE RT ALK

STEPHANIA JAPONICA MIERS

“JAPANESE TAPE-VINE”

AKNADICINE PL WOI
AKNADINE PL WOI
AKNADININE PL WOI

ALKALOIDS 25,000 RH WOI
 ALKALOIDS 27,200 RT WOI
 ALKALOIDS 600 ST WOI
 CYCLEANINE PL ALK
 CYCLANOLINE PL ALK
 DEHYDROEPISTEPHANINE ST HHB
 EPISTEPHAMIERSINE PL HHB
 EPISTEPHANINE ST ALK
 D-FANGCHINOLINE LF WOI
 HASUBANONINE PL ALK
 HERNANDOLINE PL WOI
 HOMOEPITSTEPHANINE ST ALK
 HOMOSTEPHANOLINE ST ALK
 HYPOEPISTEPHANINE PL WOI
 INSULARINE PL ALK
 ISOCHONDRODENDRINE LF WOI
 ISOTRILOBINE PL WOI
 METAPHANINE ST ALK
 N-NOR-1,2-DEHYDROEPISTEPHANINE
 ST HHB
 OBAMEGINE PL WOI
 16-OXOHASUBONINE PL JSG
 16-OXOPROTOMETAPHANINE PL JSG
 OXOSTEPHAMIERSINE PL HHB
 OXOSTEPHANINE PL JSG
 PLASTOQUINONE LF WOI
 PROMETAPHANINE ST ALK
 PROTOSTEPHANABERRINE PL JSG
 PROTOSTEPHANINE ST ALK
 L-QUERCITOL 4,000 LF WOI
 STEBISIMINE PL ALK
 STEPHABENINE PL JSG
 STEPHAMIERSINE PL HHB
 STEPHANABERRINE PL JSG
 STEPHANINE ST ALK
 STEPHANOLINE ST ALK
 STEPHASUNOLINE PL HHB
 STEPHOLINE RT ALK
 STEPISIMINE PL HHB
 STEPINONINE RT HHB
 STEPONINE RT ALK
 D-TETRANDRINE LF WOI
 VIBURNITOL 4,000 LF WOI

**STEPHANIA TETRANTRA S.
MOORE**

“STEPHANIA”

CYCLANOLINE RT CCO
 DIMETHYLTETRANDRINE PL CCO
 FANGCHINOLINE WD ALK
 HANDFANGCHINS PL CCO
 ISOTETRANDRINE PL ALK
 MENISIDINE PL ALK

MENISINE PL ALK
 STEARIC-ACID-GLYCERIDES SD HHB
 TETRANDRINE WD ALK

STERCULIA URENS ROXB.

“KARAYA”

ACETIC-ACID GUM AYL
 ASH 59,200 GUM WOI
 CARBOHYDRATES 280,000 SD WOI
 ALPHA-CELLULOSE 239,248 WD WOI
 FAT 200,000-260,000 SD HHB WOI
 FAT 2,800 GUM WOI
 FIBER 4,100 GUM WOI
 FURFURAL 12STEPHANINE RT ALK
 3,000 GUM WOI
 GALACTOSE (10%) GUM AYL
 D-GALACTOSE GUM AYL
 BETA-D-GALACTOSE GUM AYL
 D-GALACTURONIC-ACID GUM AYL
 D-GLUCURONIC-ACID (50%) GUM AYL
 LIGNOCERIC-ACID 3,740-4,082 SD HHB
 WOI
 LINOLEIC-ACID 4,840-6,292 SD HHB
 WOI
 MUCILAGE 700,000-750,000 GUM HHB
 MYRISTIC-ACID 9,300-12,090 SD HHB
 WOI
 OLEIC-ACID 133,180-173,134 SD HHB
 WOI
 PALMITIC-ACID 35,640-46,332 SD HHB
 WOI
 PROTEIN 350,000 SD WOI
 PROTEIN 6,300 GUM WOI
 RHAMNOSE (40%) GUM AYL
 L-RHAMNOSE GUM AYL
 RIBOFLAVIN 17-31 GUM WOI
 SCPOLETIN BK WOI
 STEARIC-ACID 4,020-5,226 SD HHB WOI
 TANNIN 20,000 GUM HHB
 TANNIN BK WOI
 URONIC-ACID 319,100 GUM WOI
 WATER 120,000-240,000 GUM AYL

**STEVIA REBAUDIANA (BERT.)
HEMSL.**

“CA-A-E;

SWEET LEAF OF PARAGUAY”

ALUMINUM 72 LF PED
 ASCORBIC-ACID 110 LF PED
 ASH 63,000 LF PED
 AUSTRONULIN PL JSG
 CALCIUM 5,440 LF PED

BETA-CAROTENE 75 LF PED
 CHROMIUM 39 LF PED
 COBALT 25 LF PED
 DULCOSIDES PL JSG
 FAT 19,000 LF PED
 FIBER 152,000 LF PED
 IRON 39 LF PED
 KILOCALORIES 2,540 LF PED
 MAGNESIUM 3,490 LF PED
 MANGANESE 147 LF PED
 NIACIN TR LF PED
 PHOSPHORUS 3,180 LF PED
 POTASSIUM 17,800 LF PED
 PROTEIN 112,000 LF PED
 REBAUDIOSIDES PL JSG
 RIBOFLAVIN TR LF PED
 SELENIUM 25 LF PED
 SILICON 132 LF PED
 SODIUM 892 LF PED
 STEVIOL PL JSG
 STEVIOSIDE PL JSG
 THIAMIN TR LF PED
 TIN 15 LF PED
 WATER 823,000 LF PED
 ZINC TR LF PED

STILLINGIA SYLVATICA L.

“QUEEN’S-DELIGHT”

APOCININE
 CALCIUM 3,100
 CALCIUM-OXALATE
 ECHIINE
 EO 30,000-40,000
 FAT 30,000-32,000 SD
 FIBER 139,000
 GNIDILATIN RT 411/
 HCN
 PHORBOLS PL JSG
 PHOSPHORUS 2,400
 PROSTATIN RT 411/
 PROTEIN 217,000
 RESIN
 RESINIC-ACID
 SILVACROL
 STILLINGINE
 TANNIN

STROPHANTHUS GRATUS
 (WALLICH & HOOK.) BAILL.

“OUABAIN”

ACOLONGIFLOROSIDE-K 4,000 SD HHB
 BIPINDOSIDE SD HHB

CHOLINE SD HHB
 GLYCOSIDES 40,000-80,000 SD HHB
 LINOLEIC-ACID 90,000 SD HHB
 OLEIC-ACID 90,000 SD HHB
 OUABAIN 36,000-76,000 SD HHB
 SARHAMNOLOSIDE SD HHB
 SARMENTOSIDE-E SD HHB
 SARMENTOLOSIDE SD HHB
 SARNOVIDE SD HHB
 STROGOSIDE 4,000 SD HHB
 STROPHANTHINIC-ACID SD HHB
 THOLLOSIDE SD HHB
 TRIGONELLINE SD HHB

(ASSUMES SEED FAT CONTENT OF
 300,000)

STROPHANTHUS HISPIDUS

A. DC.

“HISPID OUABAIN”

CHOLINE SD WBB
 CYMARIN 5,000-10,000 SD HHB
 CYMARINE 14,700 SD WBB
 CYMAROL 650-6,500 SD HHB WBB
 CYMARYL-ACID SD HHB
 EMICYMARIN SD HHB
 FAT 320,000 SD HHB
 9-HYDROXY-OCTADEC-12-ENOIC-ACID
 SD WBB
 INAEIN SD WBB
 PERIPLOCYMARIN SD HHB
 PERIPLOGENIN SD WBB
 PSEUDOSTROPHANTHIN SD WBB
 SAPONINS SD WBB
 SARMENTOCYMARIN SD HHB
 STROPHANTHIDIN SD WBB
 STROPHANTHIDOL SD WBB
 STROPHANTHIN 600-700 SD WBB
 STROPHANTHINIC-ACID SD HHB
 TRIGONELLINE SD WBB

STROPHANTHUS KOMBE

OLIVER

“KOMBE ARROW POISON”

ALLO-CYMARIN SD WBB
 CARDENOLIDES 70,000-100,000 SD HHB
 CYMARIN 2,400 SD HHB
 CYMAROL SD HHB
 CYMAROSE SD WBB
 EMICYMARIN SD HHB
 ERYSIMOL SD HHB
 ERYSIMOSIDE PL JSG

ERYSIMOSOL PL JSG
 GLUCOCYMAROL PL JSG
 GLUCOHELVETICOSIDE SD HHB
 HELVETICOSIDE SD HHB
 ISOEMICYMARIN PL JSG
 ISOPERIPLOCYMARIN PL JSG
 MUSAROSIDE PL JSG
 NEOGLUCOERYSIMOSIDE SD HHB
 PANSTROSIDE PL JSG
 PERIPLOCYMARIN SD HHB
 PERIPLOGENIN SD WBB
 STROPHANTHIDIN SD HHB
 STROPHANTHIDIN-GLYCOSIDE SD
 HHB
 STROPHANTHIDIOL SD HHB
 STROPHANTHIDOL SD HHB
 STROPHANTHIDOL-DIGITOXOSIDO-
 GLUCOSIDE SD HHB SD HHB
 K-STROPHANTHIN-BETA SD HHB
 K-STROPHANTHOL-GAMMA SD HHB
 K-STROPHANTHOSIDE SD HHB
 17-BETA-H-STROPHANTHOSIDE SD
 HHB
 STROPHANTHOSIDE-19-CARBOXYLIC-
 ACID SD HHB
 TRIGONELLINE SD HHB

STRYCHNOS NUX-VOMICA L.

“NUX-VOMICA”

“STYCHNINE”

ALKALOIDS 99,000 BK WOI
 ALKALOIDS 9,900 RT WOI
 ALKALOIDS 2,500-50,000 SD HHB
 ALPHA-AMYRIN SD HHB
 ARABINOSE SD HHB
 ARACHIDIC-ACID 2,800-3,500 SD WOI
 BEHENIC-ACID 680-850 SD WOI
 BRUCINE 48,000 BK WOI
 BRUCINE 2,770 RT WOI
 BRUCINE 8,000 LF CRC
 BRUCINE 16,000 SD CRC HHB
 BRUCINE 300-650 FR CCO
 BRUCINE-N-OXIDE 90-160 FR CCO
 CHLOROGENIC-ACID SD HHB
 CHOLINE SD HHB
 ALPHA-COLUBRINE SD HHB
 BETA-COLUBRINE 40 FR CCO
 CONDYLOCARPINE SD 411/
 CYCLOARTENOL SD HHB
 4-DEOXYLOGANIN PL JSG
 DIABOLINE SD 411/

FAT 40,000-50,000 SD HHB
 GALACTOSE SD HHB
 GEISSOSCHIZINE SD 411/
 16-HYDROXY-ALPHA-COLUBRINE SD
 HHB
 16-HYDROXY-BETA-COLUBRINE SD
 HHB
 HYDROXYSTRYCHNINE 7-20 FR CCO
 ICAJINE 20-60 FR CCO
 ISOSTRYCHNINE SD HHB
 LINOLEIC-ACID 360-4,600 SD HHB WOI
 LOGANIC-ACID SD HHB
 LOGANIN FR HHB
 NOR-MACUSINE SD 411/
 MANNOSE SD HHB
 C-MAVACURINE 1,000 RT BK WOI
 3-METHOXYICAJINE PL JSG
 N-METHYL-SEC-PSEUDO-BETA-
 COLUBRINE 7 FR CCO
 MYRISTIC-ACID 360-450 SD WOI
 NOVACINE 180-200 FR CCO
 OLEIC-ACID 2,480-31,000 SD HHB WOI
 PALMITIC-ACID 5,040-6,300 SD WOI
 PSEUDOBRUCINE 30-80 FR CCO
 PSEUDO-ALPHA-COLUBRINE SD 411/
 PSEUDOSTRYCHNINE 20-30 FR CCO
 SECOLOGANIN FR CCO
 STEARIC-ACID 2,640-3,300 SD WOI
 STIGMASTEROL SD HHB
 STRUXINE SD HHB
 STRYCHNICINE 250 LF CRC
 STRYCHNINE 15,800 BK WOI
 STRYCHNINE 7,030 RT WOI
 STRYCHNINE 8,000 LF CRC
 STRYCHNINE 400-12,000 SD CCO CRC
 HHB
 STRYCHNINE-N-6-OXIDE 20-50 FR CCO
 VOMICINE 130-910 FR CCO
 XYLOSE SD HHB

STYRAX BENZOIN DRYANDER 1/

“STYRAX; BENZOIN; ONYCHA”

BENZALDEHYDE AYL
 BENZOIC-ACID (9-20%RESIN) AYL
 CINNAMIC-ACID (10-30%RESIN) AYL
 CINNAMYL-CINNAMATE AYL
 CONIFERYL-BENZOATE AYL
 CONIFERYL-CINNAMATE (70-
 80%RESIN) AYL
 PHENYLPROPYL-CINNAMATE
 (2-5%RESIN) AYL

RESIN AYL
 STYRENE AYL
 SUMARESINOIC-ACID AYL
 VANILLIN (1-2%RESIN) HHB

1/Who knows which species of which adulterated resin reached the unvouchered chemist's desk. All the so-called balsams and benzoin data should be pitched, and a new start begun, only with vouchered specimens, with the resin collected by the vouchering taxonomist.

***STYRAX TONKINENSIS* (PIERRE)
 CRAIB EX HARTWICH**

"SIAM BENZOIN 1/"

BENZOIC-ACID (11-20%RESIN) AYL
 CINNAMIC-ACID 0-1 AYL
 CINNAMYL-BENZOATE (2.3%EO) AYL
 CINNAMYL-CINNAMATE AYL
 CONIFERYL-BENZOATE (60-80%RESIN) AYL
 RESIN (70-80%GUM) AYL
 D-SIARESINOLIC-ACID
 VANILLIN (0.3%RESIN) AYL

***SWEETIA PANAMENSIS* BENTH.**

"BILLY WEBB"

"CASCARA AMARGA"

LUPEOL BK HHB
 PICRAMNINE? 30,000 BK HHB
 SWEETINE 30,000 BK HHB
 SWEETININE PL ALK

***SWERTIA CHIRATA* BUCH.-HAM.**

"CHIRATA"

"CHIRETTA"

AMAROGENIN 200 PL HHB WOI
 BETA-AMYRIN PL AYL
 CHIRATANIN PL ABS
 CHIRATIN PL WOI
 CHIRATOGENIN PL HHB
 DECUSSATIN PL AYL
 1,8-DIHYDROXY-3,7-DIMETHOXYXANTHONE PL AYL
 ENICOFLAVINE PL 411/
 GENTIANINE PL 411/

GENTIOCRUCIN PL 411/
 GENTIOPICRIN PL WOI
 1-HYDROXY-3,5,8-TRIMETHOXYXANTHONE PL AYL
 ISOBELLIDIFOLIN PL AYL
 LUPEOL PL AYL
 MANGIFERIN PL AYL
 OLEIC-ACID PL HHB
 OPHELIC-ACID PL WOI
 PALMITIC-ACID PL WOI
 RESIN PL HHB
 STEARIC-ACID PL HHB
 SWERCHIRIN PL WOI
 SWERTIANIN PL AYL
 SWERTININ PL AYL
 TANNIN PL HHB
 1,3,7,8-TETRAHYDROXYXANTHONE PL AYL

***SYMPHORICARPOS
 ORBICULATUS* MOENCH.**

"BUCKBUSH"

ALUMINUM 190-4,400 ST USG
 ASH 38,000-88,000 ST USG
 BARIUM 11-2,640 ST USG
 BORON 3-26 ST USG
 CADMIUM 0-5 ST USG
 CALCIUM 2,584-22,880 ST USG
 CHROMIUM 0.27-6.16 ST USG
 COBALT 0-2.4 ST USG
 COPPER 3.8-132 ST USG
 FLUORINE 0-0.264 ST USG
 IODINE 4-6 ST USG
 IRON 19-4,400 ST USG
 LEAD 2-176 ST USG
 LITHIUM 0.152-1.06 ST USG
 MAGNESIUM 380-8,800 ST USG
 MANGANESE 19-2,640 ST USG
 MERCURY 0-0.050 ST USG
 NICKEL 0.2-4.4 ST USG
 PHOSPHORUS 228-4,224 ST USG
 POTASSIUM 3,268-19,360 ST USG
 SELENIUM 0.02-0.08 ST USG
 SODIUM 11-176 ST USG
 STRONTIUM 7-440 ST USG
 TIN 0.5-2.6 ST USG
 TITANIUM 0.57-264 ST USG
 VANADIUM 0.19-4.4 ST USG
 YTTERBIUM 0.08-0.26 ST USG
 YTTRIUM 0.76-4.4 ST USG
 ZINC 2-92 (-651) ST USG
 ZIRCONIUM 0.8-44 ST USG

SYMPHYTUM OFFICINALE L.

"COMFREY"

ALLANTOIN 13,000 LF HHB
 ALLANTOIN 6,000-8,000 (25,500) RT HHB (PED)
 ALUMINUM 237 RT PED
 L-ARABINOSE RT HHB
 ASCORBIC-ACID 132 RT PED
 ASH 140,000 RT PED
 ASPARAGINE 10,000-30,000 RT HHB
 CAFFEIC-ACID RT HHB
 CALCIUM 11,300 RT PED
 CARBOHYDRATES 759,000 RT PED
 CAROTENES 6,300 PL HHB
 BETA-CAROTENE 660 RT PED
 CHLOROGENIC-ACID RT HHB
 CHOLINE RT HHB
 CHROMIUM 8 RT PED
 COBALT 129 RT PED
 CONSOLICINE RT HHB
 CONSOLIDINE RT HHB
 ECHIMIDINE RT PED
 ECHINATINE RT HHB
 FAT 17,000 RT PED
 FIBER 72,000 RT PED
 FRUCTOSE RT PED
 GABA RT HHB
 GLUCURONIC-ACID RT HHB
 GLUCOSE RT PED
 GUM 50,000-100,000 RT PED
 HELIOSUPINE-N-OXIDE RT HHB
 IRON 810 RT PED
 ISOBANERENOL RT HHB
 KILOCALORIES 2,170 RT PED
 LASIOCARPINE RT HHB
 LITHOSPERMIC-ACID RT HHB
 LYCOPSAMINE RT PED
 MAGNESIUM 1,700 RT PED
 MANGANESE 67 RT PED
 D-MANNOSE RT HHB
 MUCILAGE 290,000 RT 411/
 MUCOPOLYSACCHARIDES 250,000-300,000 RT PED
 NIACIN 67 RT PED
 OCTADECATETRAENIC-ACID SD HHB
 PHOSPHORUS 2,111 RT PED
 POTASSIUM 15,900 RT PED
 PROTEIN 94,000 RT PED
 PYROCATECHINS 24,000 RT HHB
 REDUCING-SUGARS 51,500 RT HHB
 RESIN RT HHB
 L-RHAMNOSE RT HHB

RIBOFLAVIN 7.2 RT PED
 ROSMARINIC-ACID LF 5,000 APF48:103
 SELENIUM 5.7 RT PED
 SILICIC-ACID 40,000 LF HHB
 SILICIC-ACID RT HHB
 SILICON 35 RT PED
 SITOSTEROL RT PED
 SODIUM 3,510 RT PED
 STIGMASTEROL RT PED
 SUCROSE RT HHB
 SYMLANDINE PL 411/
 SYMPHYTINE RT PED
 SYMPHYTOCYNOGLOSSIN RT HHB
 TANNIN 80,000-90,000 PL HHB
 THIAMIN 1.2 RT PED
 TIN 6.7 RT PED
 VIRIDIFLORINE PL JSG
 WATER 862,000 RT CRC
 XYLOSE RT HHB
 ZINC 2.8 RT PED

SYMPLOCARPUS FOETIDUS (L.)
NUTT.

"SKUNK CABBAGE"

CALCIUM-OXALATE PL CRC
 N-HYDROXYTRYPTAMINE LF CRC
 RESIN PL CRC
 TANNIN PL CRC

SYZYGIUM AROMATICUM (L.)
MERR. & PERRY

"CLOVE"

ACETYL-EUGENOL FL 411/
 ALPHA-AMORPHENE 1 FL BML
 ALUMINUM 80-160 FL BML
 TRANS-ANETHOLE FL BML
 ASCORBIC-ACID 810 BK CRC
 BARIUM 20-30 FL BML
 BENZALDEHYDE FL 411/
 BENZYL-ACETATE
 BENZYL-ALCOHOL
 BENZYL-TIGLATE
 BORON 10-40 FL BML BOB
 ALPHA-CADINENE FL BML
 10-ALPHA-CADINOL FL BML
 CALACORENE FL BML
 CALAMENENE FL BML
 CALCIUM 6,460-9,540 FL CAL CRC SMO
 CALCIUM-OXALATE
 CAMPESTEROL PL JSG
 CAMPESTEROL-GLUCOSIDE

CARBOHYDRATES 555,000-612,000 BK
CRC
BETA-CAROTENE 2-3 BK CRC
CARVONE
CARYOPHYLLENE 7,4400-8,160 FL BML
ALPHA-CARYOPHYLLENE FL 411
BETA-CARYOPHYLLENE FL 411/
GAMMA-CARYOPHYLLENE
CARYOPHYLLENE-OXIDE
CHAVICOL 465-510 FL BML
CHROMIUM 3-5 FL BML ABS 5/
CINNAMALDEHYDE 1 FL BML
COBALT 0.7 FL ABS 5/
ALPHA-COPAENE FL 411/
COPPER 3-9 FL SMO ABS USA
CORNUS-TANNIN-2
CRATAEGOLIC-ACID 6 FL BML
ALPHA-CUBEBENE FL BML
DIMETHYL-FURFURAL
ELLAGIC-ACID
EO 155,000-210,000 FL BML HHB
EPOXYDIHYDROCARYOPHYLLENE
ETHYL-BENZOATE
ETHYL-CINNAMATE
ETHYL-HEXANOATE
ETHYL-OCTANOATE
EUGENINE FL BML
EUGENITINE FL BML
EUGENOL 108,655-180,000 FL BML 411/
EUGENOL 8,500-9,000 LF ST BML
FAT 89,000-201,000 FL CRC
FIBER 95,000-100,000 FL CRC
FURFURAL
FURFURYL-ALCOHOL FL BML
GALLIC-ACID FL BML
GALLOTANNIC-ACID
2-HEPTANOL FL BML
2-HEPTANONE
2-HEPTYL-ACETATE FL BML
2-HEPTYL-BENZOATE FL BML
HUMULEN-7-OL FL BML
ALPHA-HUMULENE 775-850 FL BML
HUMULENE-EPOXIDE FL BML
2ALPHA-HYDROXYOLEANOLIC-ACID-
METHYL-ESTER PL JSG
IRON 45-150 FL BML ABS 5/
ISOEUGENITENE
ISOEUGENOL
KAEMPFEROL FL BML
LINALOOL 1 FL BML
MAGNESIUM 2,640-3,020 FL BML CAL
SMO
MANGANESE 100-1,200 FL BML SMO
USA ABS 5/

MASLINIC-ACID FL HHB
METHYL-ALCOHOL
METHYL-N-AMYLKETONE FL BML
METHYL-BENZOATE
METHYL-CHAVICOL
METHYL-EUGENOL 310-340 FL BML
ALPHA-METHYL-FURFURYL
METHYL-FURFURYL-ALCOHOL
METHYL-N-HEPTYL-KETONE FL BML
METHYL-OCTANOATE
METHYL-SALICYLATE FL 411/
MUCILAGE
ALPHA-MUUROLENE
NAPHTHALENE FL BML
NICKEL 2.4 FL ABS 5/
2-NONANOL
2-NONANONE 1 FL BML
2-NONYL-ACETATE 1 FL BML
OLEANOLIC-ACID 20,000 FL HHB
PHENYLETHYL-ACETATE 1 FL BML
PHOSPHORUS 1,000-1,337 FL CRC
BETA-PINENE
POTASSIUM 11,020-16,200 FL CAL CRC
SMO
PROTEIN 52,000-70,000 FL CRC
RESIN HHB
RHAMNETIN HHB
RIBOFLAVIN 1-2 FL CRC
BETA-SITOSTEROL PL 411/
BETA-SITOSTEROL-GLUCOSIDE PL JSG
SODIUM 200-3,250 FL CRC SMO
STIGMASTEROL
STIGMASTEROL-GLUCOSIDE PL JSG
STRONTIUM 30-60 FL BML
STYRALYL-ACETATE 1 FL BML
TANNIN
ALPHA-TERPINYL-ACETATE 155-170
FL BML
THIAMIN 1 FL CRC
2-UNDECANONE FL BML
VANILLIN FL BML
WATER 69,000-252,000 FL BML
ALPHA-YLANGENE
ZINC 10-30 FL BML CAL SMO ABS 5/
ZONARENE 1 FL BML

5/ Abs=Pak.J.Sci.Ind.Res.28:234.1985.

TABEBUIA HEPTAPHYLLA
(VELL.) TOLEDO

“PAU D’ARCO”

ALUMINUM TR BK PED
ASCORBIC-ACID 181 BK PED

ASH 83,000 BK PED
 CALCIUM 32,600 BK PED
 CARBOHYDRATES 816,000 BK PED
 BETA-CAROTENE 4.2 BK PED
 CHROMIUM 9 BK PED
 CHRYSOPHANIC-ACID BK PED
 COBALT 151 BK PED
 DEHYDRO-ALPHA-LAPACHONE BK PED
 DEHYDROISOLAPACHONE BK PED
 DEHYDROTECTOL BK PED
 FAT 5,000 BK PED
 FIBER 152,000 BK PED
 IRON TR BK PED
 KILOCALORIES 2,610 BK PED
 LAPACHOL BK PED
 MAGNESIUM 810 BK PED
 MANGANESE 27 BK PED
 NIACIN 5.7 BK PED
 PHOSPHORUS 120 BK PED
 POTASSIUM 1,850 BK PED
 PROTEIN 96,000 BK PED
 RIBOFLAVIN TR BK PED
 SELENIUM 2 BK PED
 SILICON 84 BK PED
 BETA-SITOSTEROL BK PED
 SODIUM TR BK PED
 THIAMIN TR BK PED
 TIN 3.7 BK PED
 WATER 821,000 BK PED
 ZINC 7 BK PED

TABERNANTHE IBOGA BAILL.

"IBOGA"

ALKALOIDS 8,000 LF WAU89-4:24
 ALKALOIDS 55,000-60,000 RT CRC
 WAU89-4:24
 ALKALOIDS 6,000-8,000 SD WAU89-4:24
 ALKALOIDS 20,000 ST BK WAU89-4:24
 DESMETHOXYIBOLUTEINE RT CRC
 EPIBOGAMINE PL JSG
 GABONINE RT CRC
 HYDROXYINDOLEINIBOGAINE RT
 CRC
 HYDROXYINDOLEINIBOGAMINE RT
 CRC
 IBAGAMINE RT CRC
 IBOCHINE RT CRC
 IBOGAINE RT CRC
 IBOGALINE ST BK-WAU89-4:24
 IBOGAMINE RT CRC
 IBOLUTEINE RT CRC
 IBOPHYLLIDINE LF WAU89-4:24

IBOXYGAINE RT CRC
 IBOXYPHYLLINE LF WAU89-4:24
 KIMVULINE RT CRC
 KISANTINE RT CRC
 PANDOLINE LF WAU89-4:24
 TABERNANTHINE RT CRC
 TANNIN RT CRC
 TUBOTAIWINE TC WAU89-4:24
 VOACANGINE RT CRC
 VOACRISTINE RT WAU89-4:24
 VOAPHYLLINE LF WAU89-4:24

TAGETES ERECTA L.

"MARIGOLD"

5-(4-ACETOXY-1-BUTENYL)-2,2'-
 BITHIENYL PL RAA
 ANTHERAXANTHIN FL HHB
 5-(3-BUTEN-1-YNYL)-2,2'-BITHIENYL
 PL RAA
 CAMPESTEROL FL RAA
 ALPHA-CAROTENE FL HHB
 BETA-CAROTENE FL HHB
 CHOLESTEROL FL RAA
 1,8-CINEOLE 43 PL HHB
 2-CRYPTOXANTHIN FL HHB
 DITHIENYLACETYLENE FL RAA
 5'-ETHYNYL-5-(PROP-1-YNYL)-2,2'-
 BITHIENYL PL RAA
 EO 1,000 PL HHB
 FAT 200,000-205,000 SD WOI
 HELENIEN 7,400 FL RAA
 5-(4-HYDROXY-1-BUTENYL)-2,2'-
 BITHIENYL PL RAA
 6-HYDROXYKAEMPFEROL-7-O-
 GLUCOSIDE FL RAA
 8-HYDROXYQUERCETAGETIN FL RAA
 28-ISOFUCOSTEROL FL RAA
 KAEMPFERITRIN 7,000 LF HHB
 KAEMPFERITRIN FL WOI
 KAEMPFEROL LF RAA
 KAEMPFEROL-7-O-RHAMNOSIDE LF
 RAA
 D-LIMONENE 320-380 PL HHB WOI
 D-LINALOOL 59 PL HHB
 L-LINALOOL 98 PL WOI
 LINALYL-ACETATE 61 PL HHB
 LUTEIN FL HHB
 LUTEIN-DIMYRISTATE PL RAA
 LUTEIN-DIPALMITATE PL RAA
 24-METHYLENECHOLESTEROL FL
 RAA
 4BETA-METHYLERGOSTA-7,24(28)-
 DIEN-3BETA-OL FL RAA

4BETA-METHYLSTIGMASTA-7,24(28)-
DIEN-3BETA-OL FL RAA
N-NONYL-ALDEHYDE 24-60 PL HHB
OCIMENE 257-298 PL HHB WOI
ALPHA-D-PHELLANDRENE 52 PL HHB
PHYTOFLUENE FL HHB
PROTEIN 238,000-240,000 SD CRC WOI
PYRETHRINS 9,000 FL RAA
QUERCETAGETIN FL WOI
QUERCETAGITRIN FL HHB
BETA-SITOSTEROL FL RAA
STIGMASTEROL FL RAA
TAGETIN FL HHB
TAGETONE 47-62 PL HHB WOI
TERTHIENYL PL HHB
2,2',5,5"-TERTHIENYL PL HHB
XANTHOPHYLL-MYRISTATE-STEAR-
ATE PL RAA
XANTHOPHYLL-PALMITATE-STEAR-
ATE PL RAA

TAGETES MINUTA L.

"WILD MARIGOLD"

AROMADENDRENE 324-925 GEO HHB
WOI
5-(BUT-3-EN-1-YNYL-2,2'-BITHIENYL
PL JSG
D-CARVONE 122-325 PL GEO HHB
5-(4-CHLORO-3-HYDROXYBUT-1-
YNYL)-2,2-BITHIENYL RT HHB
1,8-CINEOLE 47-125 PL GEO HHB
CITRAL PL HHB
CYMENE PL HHB
2,6-DIMETHYL-7-OCTEN-4-ONE 93-500
PL GEO
EO 1,870-5,000 PL GEO
EUDESMOL 41-110 PL GEO WOI
FUMARIC-ACID-MONOMETHYLESTER
PL HHB
GERANIOL PL HHB
2-HEXEN-1-AL 65-175 PL GEO WOI
D-LIMONENE 56-425 PL GEO HHB
LINALYL-ACETATE 34-125 PL GEO
HHB WOI
L-LINALOOL 1-175 PL GEO HHB WOI
LINALOOLMONOXIDE 93-250 PL GEO
HHB
BETA-MYRCENE 374-1,000 PL GEO
HHB
OCIMENE 280-1,500 PL GEO WOI
OCIMENONE PL HHB
(5E)-OCIMENONE PL ABS
PATULETRIN PL HHB

BETA-PHELLANDRENE PL HHB
PHENYLACETALDEHYDE 65-175 PL
GEO WOI
PHENYLETHYL-ALCOHOL 288-770 PL
GEO WOI
ALPHA-PINENE PL HHB
BETA-PINENE PL HHB
QUERCETAGETRIN PL HHB
SABINENE PL HHB
SALICYLALDEHYDE 47-395 PL GEO
HHB WOI
SYRINGIC-ACID-MONOMETHYLESTER
PL HHB
TAGETONE 288-3,000 PL GEO WOI
TERPINEOL PL HHB
VALERIC-ACID PL AYL

TAGETES PATULA L.

"FRENCH MARIGOLD"

CAFFEIC-ACID PL HHB
P-COUMARIC-ACID PL JLS58:163
ELLAGIC-ACID PL HHB
EO 1,500 PL HHB
HELENIN FL HHB
KAEMPFEROL PL JLS58:163
D-LIMONENE 352 PL HHB
L-LINALOOL 398 PL HHB
LINALYL-ACETATE 262 PL HHB
LUTEIN FL HHB
METHYL-HEPTENOL 105 PL HHB
OCIMENE 172 PL HHB
PATULETIN PL HHB
PATULITRIN FL HHB
PHYTOMELAN FR HHB
QUERCETAGETIN FL HHB
QUERCETAGITRIN FL HHB
QUERCETIN PL JLS58:163
RUBICHROM FL HHB
RUBIXANTHIN FL HHB
TAGETONE 210 PL HHB
TERTHEIN FL RT WOI
VIOLAXANTHIN FL HHB

TAMARINDUS INDICA L.

"TAMARIND"

ACETIC-ACID FR WOI
ALKYLTHIAZOLES FR 411/
ARABINOSE FR WOI
D-ARABINOSE SD WOI
ASCORBIC-ACID 24-585 FR CRC USA
ASCORBIC-ACID 263 LF CRC
ASCORBIC-ACID 600 FL CRC

- ASH 35,000 FL CRC
 ASH 25,000-32,000 SD WOI
 ASH 26,000-73,000 LF CRC
 ASH 27,000-39,358 FR USA
 CALCIUM 1,053-23,000 LF CRC
 CALCIUM 2650 FL CRC
 CALCIUM 698-2,829 FR CRC USA
 CALCIUM 1,210 SD WOI
 CALCIUM-PECTATE FR WOI
 CALCIUM-TARTRATE FR WOI
 CARBOHYDRATE 625,000-925,000 FR CRC USA
 CARBOHYDRATE 706,000-750,000 LF CRC
 CARBOHYDRATE 651,000-740,000 SD WOI
 CARBOHYDRATE 750,000 FL CRC
 BETA-CAROTENE 10 FL CRC
 BETA-CAROTENE 0-1 FR CRC
 BETA-CAROTENE 2-110 LF CRC WOI
 CELLULOSE 18,000-32,000 FR HHB
 CHLORINE 940 LF WOI
 CINNAMALDEHYDE FR 411/
 CITRIC-ACID FR WOI
 COPPER 21 LF WOI
 P-CRESOL FR CRC(FNS)
 ETHYL-CINNAMATE FR 411/
 FAT 3,000-9,000 FR CRC USA
 FAT 60,000-74,000 SD WOI
 FAT 90,000 FL CRC
 FAT 36,000-44,000 LF CRC
 FIBER 60,000 FL CRC
 FIBER 7,000-43,000 SD WOI
 FIBER 57,000-186,000 LF CRC
 FIBER 31,000-74,343 FR USA
 FRUCTOSE 90,000-120,000 FR WOI
 GALACTOSE FR WOI
 D-GALACTOSE SD WOI
 GALACTURONIC-ACID FR WOI
 GERANIAL EO 411/
 GERANIOL EO 411/
 GLUCOSE 210,000-280,000 FR WOI
 D-GLUCOSE SD WOI
 HCN PL WBB
 HORDENINE BK WOI
 INVERT-SUGARS 300,000-400,000 FR WOI
 IRON 13-109 FR USA WOI
 IRON 70 FL CRC
 IRON 52-88 LF CRC WOI
 ISOORIENTIN LF WOI
 ISOVITEXIN LF WOI
 LACTIC-ACID FR WOI
 LIMONENE FR 411/
 LINOLEIC-ACID 27,840-34,336 SD WOI
 LINOLEIC-ACID 590-860 FR USA
 LYSINE 1,390-2,026 FR USA
 MAGNESIUM 710 LF WOI
 MAGNESIUM 920-1,341 FR USA
 MALIC-ACID 15,000 LF WOI
 MALIC-ACID 10,000 FR WOI
 METHIONINE 140-204 FR USA
 METHOXYL FR WOI
 METHYL-GLUTAMIC-ACID SP WOI
 METHYLENEGLUTAMIC-ACID SP WOI
 METHYLENEGLUTAMINE SP WOI
 METHYL-SALICYLATE FR 411/
 MUFA 1,810-2,640 FR USA
 MYRISTIC-ACID 70-102 FR USA
 NIACIN 16-33 FR USA
 NIACIN 60 FL CRC
 NIACIN 66 LF CRC
 OLEIC-ACID 16,320-20,128 SD WOI
 OLEIC-ACID 1,810-2,638 FR USA
 ORIENTIN LF WOI
 OXALIC-ACID 1,960 LF WOI
 OXALIC-ACID FR WOI
 PALMITIC-ACID 1,680-2,449 FR USA
 PANTOTHENIC-ACID 1-2 FR USA
 PECTIN 20,000-25,000 FR HHB WOI
 PENTOSAN 42,000-48,000 FR HHB WOI
 PHENOL FR CRC(FNS)
 PHLOBOTANNIN SD WOI
 PHOSPHORUS 1,130-1,647 FR USA
 PHOSPHORUS 2,200 FL CRC
 PHOSPHORUS 1,000-2,281 LF CRC
 PHOSPHORUS 2,370 SD WOI
 PIPECOLINIC-ACID FR WOI
 PIPERITONE FR 411/
 POTASSIUM 6,280-15,415 FR CRC USA
 POTASSIUM 12,700 FL CRC
 POTASSIUM 11,974 LF CRC
 POTASSIUM-OXIDE 1,032-7,654 FR HHB
 PROLINE FR WOI
 PROTEIN 28,000-117,000 FR CRC USA
 PROTEIN 171,000-201,000 SD WOI
 PROTEIN 125,000 FL CRC
 PROTEIN 141,000-224,000 LF CRC
 PUFA 590-860 FR USA
 PYRIDOXINE 1-2 FR CRC USA
 QUINIC-ACID FR WOI
 RIBOFLAVIN 6 FL CRC
 RIBOFLAVIN 1-5 LF CRC WOI
 RIBOFLAVIN 1-3 FR USA
 SAFROLE FR 411/
 SFA 2,720-3,965 FR USA
 SODIUM 250 FL CRC
 SODIUM 351 LF CRC

SODIUM 49-743 FR CRC USA
 STEARIC-ACID 600-874 FR USA
 SUCCINIC-ACID FR WOI
 SULFUR 630 LF WOI
 TANNIN 70,000 BL
 TANNIN SD WOI
 TARTARIC-ACID 120,000-280,000 LF
 WOI
 TARTARIC-ACID 80,000-180,000 FR WOI
 ALPHA-TERPINEOL FR 411/
 THIAMIN 4 FL CRC
 THIAMIN 4 LF CRC
 THIAMIN 2-9 FR USA
 TRYPTOPHAN 180-262 FR USA
 URONIC-ACID FR WOI
 VITEXIN LF WOI
 D-XYLOSE SD WOI
 WATER 314,000 FR USA

TANACETUM VULGARE L.

“TANSY”

APIGENIN PL 411/
 ARBUSCULIN-A M&R
 ARTEMISIA-ALCOHOL PL
 ARTEMISIA-KETONE PL
 ARTEMORIN PL ABS
 ALPHA-BERGAMOTENE
 BORNEOL
 BORNYL-ACETATE PL 411/
 GAMMA-CADINENE
 CAFFEIC-ACID
 ALPHA-CAMPHOLENOL
 CAMPHOR 0-1,800 LF WOI ABS
 CARYOPHYLLENE
 CHLOROGENIC-ACID
 CIS-CHRYSANTHENYL-ACETATE
 TRANS-CHRYSANTHENYL-ACETATE
 1,8-CINEOLE 472-1,300 LF ABS WOI
 COSTUNOLIDE-DIEPOXIDE
 CRISPOLIDE
 DAVANONE 7,061-8803 SH ABS
 11,13-DEHYDRODESACETYL-
 MATRICARIN FL ABS
 DESACETYLPYRETROSIN FL ABS
 DIOSMETIN PL 411/
 BETA-ELEMENE
 EO 4,000-5,000
 L-EPIUDOVICIN-C PL 411/
 EUPATILIN
 GERMACRENE-D 1,400-2,000
 PM:516.1986
 1-BETA-HYDROXYARBUSCULIN-A
 ISOCHLOROGENIC-ACID

ISOPINOCAMPHONE
 ISOTHUJONE 2,640-4,050
 JACEIDIN PL 411/
 JACEOSIDIN PL 411/
 CIS-LONGIPINANE-2,7-DIONE FL
 ABS
 1-EPI-LUDOVICIN-C FL ABS
 LYRATROL
 LYRATRYL-ACETATE
 PARTHENOLIDE PL 411/
 PHYTOSTEROLS
 ALPHA-PINENE PL 411
 PIPERITONE
 QUERCETIN PL 411/
 REYNOSIN PL JSG
 SABINENE 12-700
 SANTAMARINE ABS
 TABULIN PL JSG
 TANACETALS PL JSG
 TANACETIN ALLERGENIC M&R
 TANACETOL-A
 TANACETOL-B 1,100 PL ABS
 TANNINS
 TATRIDIN-A FL ABS
 TATRIDIN-B PL 411/
 ALPHA-TERPINENE 40-200
 GAMMA-TERPINENE
 4-THUJEN-2-ALPHA-YL-ACETATE
 BETA-THUJONE 1,124-3,500 LF ABS
 WOI
 BETA-THUJYL-ALCOHOL 348-435
 UMBELLULONE PL 411/
 VIBURNITOL LF
 VULGARONE-A PL ABS
 VULGARONE-B

TARAXACUM MONGOLICUM

HAND.-MAZZ.

“MONGOLOID DANDELION”

ASPARAGIN PL CCO
 ARSENIC 1.95 PL CAL
 CALCIUM 16,900 PL CAL
 CHOLINE PL CCO
 COPPER 19 PL CAL
 INULIN PL CCO
 IRON 910 PL CAL
 MAGNESIUM 4,050 PL CAL
 MANGANESE 178 PL CAL
 MERCURY 0.06 PL CAL
 POTASSIUM 22,800 PL CAL
 SODIUM 763 PL CAL
 TARAXAROL PL CCO

TARAXASTEROL PL CCO
ZINC 34 PL CAL

TARAXACUM OFFICINALE
WIGG.

“DANDELION”

ALUMINUM 656 RT PED
ALPHA-AMYLASE
BETA-AMYRIN FL RT
ANDROSTEROL
ANEURINE
APIGENIN-7-GLUCOSIDE LF
ARABINOSE
ARNIDIOL FL
ARSENIC ND LF CPB38:2205
ASCORBIC-ACID 350-2,430 LF
ASCORBIC-ACID 376 RT PED
ASH 80,000 RT PED
ASPARAGINIC-ACID
BARIUM 50-80 LF CPB38:2205
BORON 4-125 LF BOB
BROMINE 30-80 LF CPB38:2205
CAFFEIC-ACID PL JLS58:163
CALCIUM 1,870-13,000 LF
CALCIUM 6,140 RT PED
CALCIUM 12,000-21,000 PL CPB38:2205
CAOUTCHOUC 3,000 PL (0.1% LX)
CARBOHYDRATES 92,000-486,000 LF
CARBOHYDRATES 749,000 RT PED
BETA-CAROTENE 84 RT PED
CEROTIC-ACID RT HHB
CERYL-ALCOHOL LX
CHOLINE RT 411/
CHLORINE 5,300-22,000 LF CPB38:2205
CHROMIUM 9 RT PED
CHROMIUM 11-50 LF CPB38:2205
CHRYSANthemUMXANTHIN FL
CLUYTIANOL RT
COBALT 80 RT PED
COPPER 9-12 LF CPB38:2205
P-COUMARIC-ACID PL JLS58:163
COUMESTROL
CRYPTOXANTHIN FL
CRYPTOXANTHIN-EPOXIDE FL
CYCLOARTANOL PL(=POLLEN)
CYCLOARTENOL PL
3,4-DIHYDROXYCINNAMIC-ACID
11,13-DIHYDROTARAXIN-ACID-BETA-
D-GLUCOPYRANOSYL-ESTER PL JSG
FARADIOL
FAT 7,000-48,600 LF
FAT 16,000 RT PED
FIBER 4,400-111,110 LF

FIBER 89,000 RT PED
FLAVOXANTHIN FL JSG
FRUCTOSE RT
GERMACRANOLIDE PL 411/
GLUCOSE 5,000 RT
D-GLUCURONIC-ACID
GLUTAMIC-ACID LF
GLYCEROL LX
HOMOANDROSTEROL RT
HOMOTARAXASTEROL RT PED
P-HYDROXYPHENYLACETIC-ACID PL
411/
INULIN 250,000-400,000 RT PED
IODINE ND LF CPB38:2205
IRON 31-215 LF
IRON 500-5,000 LF CPB38:2205
IRON 960 RT PED
KILOCALORIES 2,650 RT PED
LACTUCEROL
LEAD ND PL CPB38:2205
LECITHIN 29,700 FL WOI
LEVULIN
LEVULOSE
LINOLEIC-ACID RT
LINOLENIC-ACID RT
LUTEIN FL LF
LUTEOLIN-7-GLUCOSIDE LF
MAGNESIUM 360-2,500 LF USA
MAGNESIUM 1,570 RT PED
MANGANESE 100-130 PL CPB38:2205
MANGANESE 68 RT PED
MANNITOL RT
MELISSIC-ACID RT
MOLYBDENUM ND PL CPB38:2205
MUCILAGE 85,000 RT
NIACIN 8-33 RT PED
NICKEL ND PL CPB38:2205
NICOTINIC-ACID RT
31-NORCYCLOARTENOL PL
OLEIC-ACID RT
PALMITIC-ACID RT
PECTINS 78,000 RT
PHLOBAPHENE RT
PHOSPHORUS 591-4,583 LF USA
PHOSPHORUS 3,100-3,620 RT PED
CPB38:2205
POLLINASTANOL PL
POTASSIUM 3,970-27,569 LF JAD
POTASSIUM 12,000-75,000 RT PED
CPB38:2205
PROTEIN 27,000-187,500 LF
PROTEIN 36,000-165,000 RT JAD PED
PSEUDOTARAXASTEROL PL JSG
RESIN RT

RIBOFLAVIN 1-18 LF
 RIBOFLAVIN 2.1 RT PED
 RUBIDIUM 19-50 PL CPB38:2205
 SACCHAROSE 11,000 RT WOI
 SAPONIN
 SELENIUM 8.6 RT PED
 SILICON 47 RT PED
 BETA-SITOSTEROL PL 411/
 SODIUM 760-5278 LF
 SODIUM 1,130 RT PED
 STIGMASTEROL RT
 STRONTIUM 64-120 PL CPB38:2205
 SUCROSE
 SULFUR 2,600-3,300 PL CPB38:2205
 TANNIN RT
 TARAXACERINE RT
 TARAXACINE RT
 TARAXACOSIDE PL 411/
 TARAXANTHIN
 TARAXASTEROL LX RT 411/
 14-TARAXEREN-3BETA-OL PL JSG
 TARAXEROL RT 411/
 TARAXIN-ACID PL JSG
 TARAXIN-ACID-BETA-D-
 GLUCOPYRANOSYL-ESTER PL JSG
 TARAXOL RT 411/
 TARTARIC-ACID
 THIAMIN 1-13 LF
 THIAMIN TR RT PED
 TIN 13 RT PED
 TITANIUM 58-330 PL CPB38:2205
 TYROSINASE RT
 VIOLAXANTHIN FL LF
 XANTHOPHYLL
 WATER 356,000-880,000 LF
 WATER 857,000 RT PED
 ZINC 13-60 RT PED CPB38:2205

TAXUS BACCATA L.

"COMMON YEW"

(+)-ABSCISSIC-ACID SD 001/
 BACCATIN RT WD 437/
 BACCATIN-1 WD 437/
 BACCATIN-2 WD 437/
 BACCATIN-3 WD 437/
 BACCATIN-4 WD 437/
 BACCATIN-5 WD 437/
 BACCATIN-6 WD 437/
 BACCATIN-7 WD 437/
 BACCATINE RT BK 001/
 BETULOSIDE PL 437/
 BETA-CAROTENE FR 001/
 CEPHALOMANINE ST BK 437/

5-DEACETYL-BACCATIN-1 WD
 437/
 10-DEACETYLCEPHALOMANNINE ST
 BK 437/
 10-DEACETYLTAXANE
 ST BK 437/
 1-DEHYDROXYBACCATIN-4 WD
 437/
 (S)-DHURRINE PL 437/
 3,4-DIVANILLYLTETRAHYDROFURAN
 PL 437/
 ECDYSTERONE LF 001/
 EPHEDRINE LF 001/
 ESCHESCHOLTZXANTHONE FR
 001/
 FERREDOXIN LF 001/
 FORMIC-ACID LF 001/
 GALLIC-ACID LF 434/
 GINKGETIN LF 437/
 HCN 12-39 LF 001/
 1BETA-HYDROXYBACCATIN-1 WD
 437/
 19-HYDROXYBACCATIN LF 437/
 ISOLARICIRE SINOL WD 001/
 ISOTAXIRESINOL WD 001/
 ISOTAXIRESINOL-6-METHYL-ETHER
 WD 001/
 ISOTAXIRESINOL-
 SECOISOLARICIRE SINOL WD 001/
 ISOTRIGLOCHININE PL 437/
 LYCOPENE FR 001/
 MYOINOSITOL-P-COUMARIC-ESTER PL
 JSG
 QUINIC-ACID PL 437/
 RESINS LF 001/
 RHODOXANTHIN FR 001/
 SCHIKIMIC-ACID PL 437/
 SCIADOPITYSIN LF 437/
 SEQUOIAFLAVONE PL 437/
 BETA-SITOSTEROL LF 001/
 SOTETSUFLAVONE LF 437/
 TANNIC-ACID LF 434/
 TAXA-4(20),11-DIENE-5ALPHA,9-
 ALPHA,10BETA, 13ALPHA-TETRAOL-
 9,10-DIACETATE WD 437/
 TAXA-4(20),11-DIENE-5ALPHA,
 7BETA,9ALPHA,10BETA,13ALPHA-
 PENTAOL-PENTACETATE WD 437/
 TAXA-4(20),11-DIENE-2ALPHA,
 5ALPHA,9ALPHA,10BETA,13ALPHA-
 PENTAOL-PENTACETATE WD 437/
 TAXA-4(20),11-DIENE-2ALPHA,5ALPHA,
 7BETA,9ALPHA,10BETA,13ALPHA-
 HEXAOL-HEXACETATE WD 437/

TAXA-4(20),11-DIENE-
2ALPHA,5ALPHA,7BETA,10BETA-
TETRAOL-5,7,10-TRIACETATE-
2ALPHA-METHYL-BUTYRATE WD
437/
TAXA-4(20),11-DIENE-2ALPHA,5ALPHA,
7BETA,9ALPHA,10BETA-PENTAOL-
7,9,10-TRIACETATE WD 437/
TAXA-4(20),11-DIENE-2ALPHA,5ALPHA,
7BETA,9ALPHA,10BETA-PENTAOL-
5,7,9,10-TETRAACETATE WD 437/
TAXICATIN LF SD 001/
TAXACATINE PL 437/
TAXIGIFINE LF 437/
TAXINE-A LF 001/
TAXINE-B LF 001/
TAXIPHYLLIN LF 001/
(R)-TAXIPHYLLINE PL 437/
TAXIRESINOL WD 001/
TAXOL LF 436/ 437/
TAXOL-A PL 437/
TAXOL-B PL 437/
TAXUSIN WD 437/
TETRAOL LFWD 437/
TOXIM LF 434/
TRIGLOCHININE PL 437/
ZEAXANTHIN FR 001/

TECOMA STANS (L.) HBK

“YELLOW ELDER”

ACTINIDINE PL RAA
ALKALOIDS 4,500 LF HHB
ALKALOIDS 4,000 SD HHB
AMARELOSIDE PL JSG
ANTHERAXANTHIN FL RAA
ANTHRANILIC-ACID PL RAA
ANTHRANILIC-ACID-GLUCOSIDE PL
RAA
BOSCHNIAKINE PL WOI
CAFFEIC-ACID PL RAA
BETA-CAROTENE FL WOI
COUMARIN 80 BK HHB
CRYPTOXANTHIN FL RAA
5-DEHYDROSKYTANTHINE PL JSG
5-DEOXYSTANSIOSIDE PL RAA
5,6,5',6'-DIEPOXYCRYPTOXANTHIN FL
RAA
FAT 200,000-230,000 SD HHB WOI
FERULIC-ACID PL RAA
HYDROXYPHENYLLACTIC-ACID PL
RAA
4-HYDROXYSKYTANTHINE PL JSG
7(A)-HYDROXYSKYTANTHINE PL JSG

5-HYDROXYSPUTANTHIN PL HHB
9-HYDROXYSPUTANTHIN PL HHB
INDOLE PL RAA
LAPACHOL PL RAA
5,6,-MONOPOXYCRYPTOXANTHIN FL
RAA
MUTATOCHROME PL RAA
4-NORACTINIDINE PL WOI
N-NORMETHYL-SKYTANTHINE PL
WOI
OCTADECADIENOIC-ACID 4,800-5,520
SD HHB WOI
OCTADECATETRAENOIC-ACID 3,800-
4,370 SD HHB WOI
3-TRANS,9-CIS,12-CIS,15-CIS-
OCTADECATETRAENOIC-ACID
38,000-43,700 SD RAA
OCTADECATRIENOIC-ACID 8,200-9,430
SD HHB WOI
OCTADECENOIC-ACID 1,400-1,610 SD
HHB WOI
PALMITIC-ACID 1,200-1,380 SD HHB
WOI
PHYTOENE PL RAA
PHYTOFLUENE-I PL RAA
PHYTOFLUENE-II PL RAA
PLANTARENALOSIDE PL JSG
QUERCETIN-3-O-GLUCOSIDE PL
RAA
BETA-SITOSTEROL FR HHB
SKATOLE PL RAA
DELTA-SKYTANTHINE PL RAA
STANSIOSIDE PL JSG
STEARIC-ACID 600-690 SD HHB
WOI
TECOMANINE PL WOI
TECOMINE LF WOI
TECOSTANINE LF WOI
TECOSTIDINE LF WOI
TRYPTAMINE PL RAA
TRYPTOPHAN PL RAA
CIS-VIOLAXANTHIN FL RAA
ZEAXANTHIN FL WOI

***TEPHROSIA CANDIDA (ROXB.)
DC.***

“WHITE TEPHROSIA”

BORON 32 PL JAD
CANDIDIN PL JSG
CANDIDONE PL JSG
CAO 7,800 PL WOI
COPPER 11.2 PL JAD
DEHYDROROTENONE PL JSG

6-HYDROXYKAEMPFEROL-4'-

METHYLETHER PL JSG
 IRON 78 PL JAD
 K2O 15,100 PL WOI
 MANGANESE 38 PL JAD
 MGO 2,500 PL WOI
 MOLYBDENUM 1.25 PL JAD
 NITROGEN 23,600 PL JAD
 OVALICALCONE PL JSG
 P2O5 5,800 PL WOI
 ROTENONE 3,500 RT BK HHB
 ROTENOIDS 5,000-11,500 SD HHB JAD
 TEPHROSIN RT HHB
 ZINC 26 PL JAD

TEPHROSIA PURPUREA PERS.

"PURPLE TEPHROSIA"

"WILD INDIGO"

ASH 77,000-99,600 LF CRC WOI
 CALCIUM 16,500 LF CRC WOI
 CARBOHYDRATES 654,000-748,000 LF
 CRC
 FAT 24,000-27,000 LF CRC
 FAT 91,000 SD CRC
 FIBER 279,000-280,000 LF CRC
 ISOTEPHROSIN RT HHB
 LUPEOL PL JSG
 MAGNESIUM 10,300 LF WOI
 NITROGEN 72,500 LF WOI
 PHOSPHORUS 2,600-5,200 LF CRC WOI
 POTASSIUM 33,800 LF WOI
 PROTEIN 147,000-244,000 LF CRC
 PROTEIN 358,000 SD CRC
 ROTENOIDS 6,500-8,000 LF WOI
 ROTENOIDS 7,000-9,500 RT WOI
 ROTENOIDS 16,000-18,000 SD WOI
 ROTENOIDS 4,000-6,500 ST WOI
 ROTENONE 7,000 RT HHB
 RUTIN LF WOI
 SILICA 21,900 LF WOI
 BETA-SITOSTEROL PL JSG
 SODIUM 8,700 LF WOI
 TEPHROSIN RT HHB

**TEPHROSIA VIRGINIANA (L.)
PERS.**

"DEVIL'S SHOESTRING"

DEGUELIN RT CRC
 DEHYDROROTENONE RT CRC
 ROTENONE RT CRC
 TEPHROSIN RT CRC

TEPHROSIA VOGELII HOOK.F.

"FISH POISON BEAN"

DEGUELIN SD WOI
 DEHYDRODEGUELIN SD HHB
 FAT 109,000-134,000 SD CRC WOI
 PROTEIN 430,000 SD CRC
 ROTENOIDS 6,500-42,500 LF WOI
 ROTENOIDS 3,000-4,500 RT WOI
 ROTENOIDS 9,000-14,000 SD WOI
 ROTENOIDS 4,000-9,000 ST WOI
 ROTENONE SD WOI
 TEPHROSAL LF HHB
 TEPHROSIN 1,500 LF HHB
 TEPHROSIN 3,000 SD HHB
 VOGELIN SD WOI
 VOGELOSIDE SD HHB

TERMINALIA CATAPPA L.

"INDIAN ALMOND"

ARACHIDIC-ACID 0-4,770 SD CRC HHB
 ASCORBIC-ACID 0- SD CRC
 ASH 24,000-43,000 SD CRC
 BREVIFOLIN-CARBOXYLIC-ACID FR
 WOI
 CALCIUM 320-5,100 SD CRC
 CARBOHYDRATES 149,000-179,000 SD
 CRC
 (+)-CATECHIN BK WOI
 BETA-CAROTENE 1.8 FR RAA
 BETA-CAROTENE 0 SD CRC
 CORILAGIN FR HHB
 CYANIDIN-3-GLUCOSIDE FR RAA
 ELLAGIC-ACID FR HHB
 (-)-EPICATECHIN BK WOI
 FAT 500,000-596,000 SD CRC JFM
 FIBER 18,000-95,000 SD CRC
 GALLIC-ACID FR HHB
 GLUCOSE 59,800 FR WOI
 IRON 0-95 SD CRC
 KAEMPFEROL LF HHB
 KILOCALORIES 5,940-6,340 SD CRC
 LEUCOCYANIDIN BK WOI
 LINOLEIC-ACID 102,600-184,450 SD CRC
 HHB RAA
 LINOLENIC-ACID 950-1,130 SD CRC
 HHB RAA
 MYRISTIC-ACID 700-5,960 SD CRC HHB
 RAA
 NIACIN 6-7 SD CRC
 OLEIC-ACID 126,250-245,000 SD CRC
 HHB

PALMITIC-ACID 156,600-232,440 SD
 CRC HHB RAA
 PALMITOLEIC-ACID 11,850-14,125 SD
 CRC HHB RAA
 PENTOSANS 251,600 FR HHB
 PHOSPHORUS 7,890-9,835 SD CRC
 POTASSIUM 7,840-8,165 SD CRC
 PROTEIN 191,000-272,500 SD CRC JFM
 QUERCETIN LF HHB
 RIBOFLAVIN 0.8-3 SD CRC
 SODIUM 700-730 SD CRC
 STEARIC-ACID 21,600-40,525 SD CRC
 HHB
 TANNIN 130,000 BK HHB
 TANNIN 60,000-200,000 FR JFM
 TERMINALIC-ACID WD HHB
 THIAMIN 3-7 SD CRC
 WATER 27,000-60,000 SD CRC

TERMINALIA CHEBULA RETZ.

“INK NUT”

“MYROBALAN”

ARABINOSE FR HHB
 ARGININE FR HHB
 ASCORBIC-ACID 920 FR HHB
 ASPARAGINE FR HHB
 CHEBULAGIC-ACID FR HHB
 CHEBULIC-ACID FR HHB
 CHEBULINIC-ACID FR HHB
 CORILAGIN 8,500 FR HHB
 DEHYDROSHIKIMIC-ACID FR HHB
 3,6-DIGALLOYLGLUCOSE FR HHB
 DIHYDROSHIKIMIC-ACID FR HHB
 ELLAGIC-ACID FR HHB
 FAT 400,000 FR HHB
 FAT 343,000-364,000 SD HHB WOI
 FRUCTOSE 10,000 FR HHB WOI
 GALLIC-ACID FR HHB
 GENTIOBIOSE FR HHB
 BETA-GLUCOGALLIN FR HHB
 GLUCOSE FR HHB
 HEXAOXYDIPHENIC-ACID FR HHB
 LINOLEIC-ACID 80,100-84,800 SD WOI
 MALTOSE FR HHB
 MYROBALANIN FR HHB
 NEOCHEBULAGIC-ACID PL JSG
 NEOCHEBULIC-ACID PL JSG
 OLEIC-ACID 200,100-213,000 SD WOI
 PECTIN 2,080 FR HHB
 1,2,3,4,6-PENTAGALLOYLGLUCOSE FR
 WOI
 PHOSPHORIC-ACID FR WOI

PROLINE FR HHB
 QUINIC-ACID 15,000 FR HHB
 RHAMNOSE FR HHB
 SENNOSIDE-A? FR HHB
 SHIKIMIC-ACID 22,000 FR HHB
 SORBITOL FR HHB WOI
 SUCCINIC-ACID FR HHB
 SUCROSE 10,000 FR HHB WOI
 SUGAR 85,000 FR HHB
 TANNINS 20,000-45,000 FR HHB
 TERCHEBIN FR HHB
 1,3,6-TRIGALLOYLGLUCOSE FR WOI
 WATER 100,000 FR WOI
 XYLOSE FR HHB

TETRACLINIS ARTICULATA

(VAHL) MASTERS

“ARAR TREE; SANDARAC”

12-BETA-ACETOXYSANDARA-
 COPIMARIC-ACID 33,000 RESIN WOI
 12-ACETYLSANDARACOPIMARIC-ACID
 PL JSG
 COMMUNIC-ACID 25,000-41,000 RESIN
 WOI
 HINOKIOL PL JSG
 HINOKIONE PL JSG
 D-LIMONENE RESIN WOI
 MANOOL RESIN WOI
 ALPHA-PINENE RESIN WOI
 BETA-PINENE RESIN WOI
 SANDARACOPIMARIC-ACID 63,000
 RESIN WOI
 SUGIOL RESIN WOI
 TORULOSAL RESIN WOI
 TORULOSIC-ACID 1,000 RESIN WOI
 TORULOSOL RESIN WOI
 TORULOSYL-MONOACETATE RESIN
 WOI
 TOTAROL WD WOI
 TOTAROLENONE PL JSG
 TOTAROLONE PL JSG

TETRAGONIA TETRAGONIODES

(PALLAS) KUNTZE

“NEW ZEALAND SPINACH”

ASCORBIC-ACID 300-5,000 LF USA
 ASH 18,000-300,000 LF USA
 CALCIUM 580-9,665 LF USA
 CARBOHYDRATES 25,000-416,665 LF
 USA
 BETA-CAROTENE 26.4-440 LF USA

FAT 2,000-33,335 LF USA
 FIBER 7,000-116,665 LF USA
 IRON 8-133 LF USA
 KILOCALORIES 140-2,335 LF USA
 LINOLEIC-ACID 130-2,165 LF USA
 LINOLENIC-ACID 660-11,000 LF USA
 MAGNESIUM 390-6,500 LF USA
 MUFA 50-835 LF USA
 MYRISTIC-ACID 40-665 LF USA
 NIACIN 5-85 LF USA
 OLEIC-ACID 30-500 LF USA
 PALMITIC-ACID 240-4,000 LF USA
 PALMITOLEIC-ACID 30-500 LF USA
 PANTOTHENIC-ACID 3-50 LF USA
 PHOSPHORUS 280-4,665 LF USA
 POTASSIUM 1,300-21,665 LF USA
 PROTEIN 15,000-250,000 LF USA
 PUFA 840-14,000 LF USA
 RIBOFLAVIN 1-20 LF USA
 SFA 320-5,335 LF USA
 SODIUM 1,300-21,665 LF USA
 STEARIC-ACID 20-335 LF USA
 (2E)-3,7,11,15-TETRAMETHYLHEXA-
 DECANAL PL JSG
 6,10,14-TRIMETHYL-2-METHYLENE-
 PENTADECANAL PL JSG
 THIAMIN 0.4-6.7 LF USA
 WATER 940,000 LF USA

TETRAPANAX PAPYRIFERA
 (HOOK.) K.KOCH

“RICE PAPER TREE; TUNG-TSAO;
 TONG-CAO”

ASH 59,000 PI WOI
 CALCIUM 18,300 PI CAL
 CARBOHYDRATES 436,000 PI WOI
 COPPER 8 PI CAL
 FAT 11,000 PI WOI
 FIBER 487,000 PI WOI
 GALACTOSE PI WOI
 D-GALACTURONIC-ACID PI WOI
 GLUCOSE PI WOI
 IRON 90 PI CAL
 MAGNESIUM 2,120 PI CAL
 MANGANESE 43 PI CAL
 MERCURY 0.05 PI CAL
 PAPHYRIOGENIN-G PL CCO
 PAPHYRIOSIDES PL JSG
 PENTOSANS 58,000 PI WOI
 POTASSIUM 3,040 PI CAL
 PROTEIN 11,000 PI WOI
 SODIUM 103 PI CAL

URONIDE 280,000 PI WOI
 XYLOSE PI WOI
 ZINC 42 PI CAL

TEUCRIUM CHAMAEDRYS L.

“WALL GERMANDER”

ACETYL-HARPAGIDE PL 411/
 AJUGOSE PL HHB
 BETA-AMYRIN PL ABS
 BORNYL-ACETATE 55 PL RIZ
 CAFFEIC-ACID PL ABS
 BETA-CARYOPHYLLENE 420 PL
 HHB
 CHLOROGENIC-ACID 200 PL ABS
 RIZ
 CHOLINE PL HHB
 CLERODANE PL 411/
 DIOSMIN PL HHB
 EO 700 PL WOI
 6-EPI TEUCRIN-A PL JSG
 FRUCTOSE PL HHB
 GALACTOSE PL HHB
 GLUCOSE PL HHB
 HARPAGIDE PL 411/
 ISOQUERCITRIN PL HHB
 ISOTEUFLIDIN PL 411/
 MARRUBIIN PL HHB
 NEOCLERODANE PL 411/
 PARAFFIN 1,000 PL HHB
 POLYPHENOLS 81,000-96,000 PL ABS
 SAPONIN PL HHB
 SACCHAROSE PL HHB
 SCUTELLARIN PL HHB
 BETA-SITOSTEROL PL ABS
 STACHYOSE PL HHB
 STIGMASTEROL PL ABS
 TANNIN 50,000 PL HHB
 TEUCHAMAEDRYINS PL JSG
 TEUCRIN-A PL HHB
 TEUCRIN-B PL HHB
 TEUCRIN-C PL HHB
 TEUCRIN-D PL HHB
 TEUCRIN-F PL HHB
 TEUCRIN-G PL HHB
 TEUCROSIDE PL 411/
 TEUCVIDIN PL 411/
 TEUCVIN PL 411/
 TEUFLIDIN PL 411/
 TEUFLIN PL 411/
 TEUGIN PL JSG
 URSOLIC-ACID PL ABS
 VERBASCOSE PL HHB

TEUCRIUM MARUM L.

"CAT THYME"

ALLODOLICHOLACTONE PL JSG
 DOLICHOLACTONE PL JSSEO PL HHB
 MARRUBIIN PL HHB
 RESIN PL HHB
 SAPONIN
 TANNIN PL HHB

TEUCRIUM POLIUM L.

"GOLDEN GERMANDER"

ACACETIN PL ABS
 8-ACETYLHARPAGIDE PL RIZ
 19-ACETYLGNAPHALIN PL RIZ
 6-ACETYLPICROPOLIN PL RIZ
 19-ACETYLTEUPOLIN PL JSG
 ALPHA-AMYRIN PL RIZ
 BETA-AMYRIN PL RIZ
 APIGENIN PL ABS
 ARACHIDIC-ACID PL RIZ
 AUROPOLIN PL RIZ
 BORNEOL PL RIZ
 BORNYL-ACETATE PL RIZ
 CADINENE PL RIZ
 CAMPHOR PL RIZ
 CAPRIC-ACID PL RIZ
 BETA-CARYOPHYLLENE PL RIZ
 CIRSIDIOL PL JSG
 CIRSILIOL PL RIZ
 CIRSIMARITRIN PL HHB
 COPAENE PL RIZ
 CYASTERON PL RIZ
 CYCLOPENTYLALDEHYDE-
 DERIVATIVE
 P-CYMENE PL RIZ
 EO 400-900 SH RIZ
 BETA-EUDESOL PL RIZ
 FAT 146,000 SD CRC
 FRUCTOSE PL RIZ
 GALACTOSE PL RIZ
 GNAPHALIDIN PL RIZ
 HARPAGIDE PL RIZ
 HEDERAGENIN PL RIZ
 ALPHA-HUMULENE PL RIZ
 ISOPICROPOLIN PL RIZ
 KAEMPFEROL PL ABS
 LAURIC-ACID PL RIZ
 LIMONENE PL RIZ
 LINOLEIC-ACID PL RIZ
 LUTEOLIN PL ABS
 MARRUBIIN PL HHB

MENTHOFURAN PL HHB
 6-METHOXYGENKWANIN PL RIZ
 MONTANIN-B PL RIZ
 MYRCENE PL RIZ
 OCIMENE PL RIZ
 OLEIC-ACID PL RIZ
 PALMITIC-ACID PL RIZ
 PHELLANDRENE PL RIZ
 PICROPOLIN PL HHB
 ALPHA-PINENE PL RIZ
 BETA-PINENE PL RIZ
 PIPERITONE PL RIZ
 PROTEIN 148,000 SD CRC
 PULEGONE PL RIZ
 RAFFINOSE PL HHB
 RHAMNOSE PL RIZ
 SACCHAROSE PL HHB
 SALVIGENIN PL RIZ
 BETA-SITOSTEROL PL RIZ
 STACHYDRINE PL HHB
 STEARIC-ACID PL RIZ
 SUCROSE PL RIZ
 TANNIN PL RIZ
 GAMMA-TERPINENE PL RIZ
 TERPINEOL PL RIZ
 TEUCARDOSIDE PL RIZ
 TEUCRIN-H-3 PL RIZ
 TEUPOLINS PL RIZ
 URSOLIC-ACID PL RIZ
 XYLOSE PL RIZ

THEOBROMA CACAO L.

"CACAO"

ACETIC-ACID 1,520-7,100 SD WOI
 ALANINE 10,400 SD WOI
 ALKALOIDS 33,900 SD WOI
 AMYL-ACETATE SD WOI
 AMYL-ALCOHOL SD WOI
 AMYL-BUTYRATE SD WOI
 AMYLASE SD WOI
 APIGENIN-7-O-GLUCOSIDE PL JSG
 ARABINOSE SD WOI
 3-ALPHA-L-ARABINOSIDYL-CYANIDIN
 FL LF SD WOI
 P-ANISIC-ACID SD CRC(FNS)
 ARACHIDIC-ACID
 ARGININE 800 SD WOI
 ASCORBIC-ACID 31 SD CRC
 ASCORBIC-ACID-OXIDASE SD WOI
 ASPARIGINASE SD WOI
 BIOTIN SP HHB
 N-BUTYLACETATE SD HHB
 I-BUTYRIC-ACID

CAFFEIC-ACID SD WOI
 CAFFEINE 850-12,900 SD WOI
 CALCIUM 800-1,100 SD CRC
 CAMPESTEROL SP HHB
 CARBOHYDRATES 347,000-445,000 SD CRC
 BETA-CAROTENE
 CATALASE SD WOI
 CATECHINS 30,000-35,000 SD WOI
 CELLULASE
 CELLULOSE
 CHLORIDE 120 SD WOI
 CHLOROGENIC-ACID LF WOI
 CHOLESTEROL
 CHRYSOERIOL-7-O-GLUCOSIDE PL JSG
 CITRIC-ACID 4,500-7,500 SD WOI
 COPPER 24 SD WOI
 P-COUMARIC-ACID SD WOI
 P-COUMARYLQUINIC-ACID LF WOI
 CYANIDIN PL JLS58:141
 CYANIDIN-3-BETA-L-ARABINOSIDE LF SD HHB
 CYANIDIN-3-GALACTOSIDE LF SD HHB
 CYANIDIN-GLYCOSIDE 4,000-5,000 SD WOI
 CYCLOARTANOL SP HHB
 DECARBOXYLASE
 DEXTRINASE
 DIACETYL
 DOPAMINE SD AYL
 EO 10 WOI
 L-EPICATECHIN 27,000 FL SD WOI
 EPIGALLOCATECHIN SD WOI
 FAT 371,000-582,300 SD WOI
 FERULIC-ACID SD
 FIBER 59,000-89,000 SD CRC
 FORMIC-ACID SD HHB
 FRUCTOSE WOI
 FURFUROL SD
 D-GALACTOSE WOI
 3-BETA-D-GALACTOSIDYL-CYANIDIN FL LF SD WOI
 GALACTURONIC-ACID
 GALLOCATECHIN
 GLUCOSE 3,000 SD WOI
 GLUTAMIC-ACID 10,200 SD WOI
 GLYCERIN WOI
 GLYCEROPHOSPHATASE WOI
 GLYCINE 900 SD WOI
 GLYCOLIC-ACID LF HHB
 GLYCOSIDASE WOI
 HAEMIN
 HAEMATIN
 HISTIDINE 800 SD WOI
 P-HYDROXYBENZOIC-ACID SD WOI
 4-HYDROXY-3-METHOXYBENZOIC-ACID SD CRC(FNS)
 O-HYDROXYPHENYLACETIC-ACID SD CRC(FNS)
 P-HYDROXYPHENYLACETIC-ACID SD WOI
 IDAEIN FL CCO
 INVERTASE SD WOI
 IRON 36-37 SD CRC
 IRON-OXIDE 40 SD WOI
 ISOBUTYLACETATE SD HHB
 ISOLEUCINE 5,600 SD WOI
 ISOPROPYL-ACETATE
 ISOVITEXIN PL JSG
 LACTIC-ACID SD HHB
 LEUCINE 4,500
 LEUCOCYANIDINS 14,000-35,000 SD WOI
 LINALOOL 5 SD
 LINOLEIC-ACID 10,700-12,230
 LIPASE SD WOI
 LUTEOLIN PL JSG
 LUTEOLIN-7-O-GLUCOSIDE PL JSG
 LYSINE 800 SD WOI
 LYSOPHOSPHATIDYLCHOLINE SD WOI
 MALEIC-ACID
 MANNAN SD WOI
 MANNINOTRIOSE SD WOI
 MANNOSE SD WOI
 MELIBIOSE SD WOI
 MESOINOSITOL SD WOI
 24-METHYLENECYCLOARTANOL SP HHB
 NIACIN 17-18 SD CRC
 NICOTINIC-ACID
 NICOTINAMIDE 21 SD WOI
 NITROGEN 22,800 SD WOI
 NONANOIC-ACID SD WOI
 OCTOIC-ACID SD WOI
 OLEIC-ACID 190,000-217,000 SD WOI
 OLEO-DIPALMATIN 76,500-92,800 SD WOI
 OLEOPALMITOSTEARIN SD AYL
 OXALIC-ACID 1,520-5,000 SD WBB WOI
 PALMITIC-ACID SD AYL
 PALMITODIOLEN SD AYL
 PANTOTHENIC-ACID 13 SD WOI
 PECTIN SD WOI
 PENTOSE SD WOI
 PEROXIDASE SD WOI
 PHENYLACETIC-ACID SD WOI

PHENYLALANINE 5,600 SD WOI
 PHLOBAPHENE
 PHOSPHATIDYL-CHOLINE 92-1,328 SD WOI
 PHOSPHATIDYL-ETHANOLAMINE
 PHOSPHATIDYL-INOSITOL
 PHOSPHOLIPIDS 255-3,319
 PHOSPHORUS 3,600-5,571 SD CRC
 PHYTASE
 PLANTEOSE
 POLYGALACTURONATE
 POLYPHENOLS 78,000-100,000 SD WOI
 POLYPHENOL-OXIDASE WOI
 PROLINE 7,200 SD WOI
 PROPIONIC-ACID SD HHB
 PROPYL-ACETATE
 PROTEIN 120,000-180,000 SD AYL CRC
 PROTEINASE SD WOI
 PROTOCATECHUIC-ACID SD WOI
 PURINE 14,000 RT HHB
 PURINE 30,000-40,000 SD HHB
 PYRIDOXINE 1 SD WOI
 QUERCETIN LF WOI
 QUERCETIN-3-O-GALACTOSIDE PL JSG
 QUERCETIN-3-O-GLUCOSIDE PL JSG
 QUERCITRIN LF WOI
 RAFFINASE WOI
 RAFFINOSE WOI
 REDUCTASE WOI
 RHAMNOSE WOI
 RIBOFLAVIN 1-4 SD WOI
 RUTIN LF WOI
 SACCHAROSE
 SALSOLINOL SD AYL
 SERINE 8,800 SD WOI
 SINAPIC-ACID? PL JLS58:141
 ALPHA-SITOSTEROL SP HHB
 BETA-SITOSTEROL SP HHB
 STACHYOSE SD WOI
 STARCH 60,000 SD HB WOI
 STEARIC-ACID
 STEARODIOLEIN SD AYL
 STIGMASTEROL
 SUCROSE
 SYRINGIC-ACID SD WOI
 TANNINS 75,400 SD WOI
 TARTARIC-ACID SD HHB
 THEOBROMINE 17,100-33,500 SD WOI
 THEOPHYLLINE PL JSG
 ALPHA-THEOSTEROL SD WOI
 BETA-THEOSTEROL SD WOI
 THIAMIN 1-3 SD CRC WOI
 THREONINE 1,400 SD WOI
 TRIGONELLINE SD AYL

TYRAMINE
 TYROSINE 5,700 SD WOI
 VALERIANIC-ACID SD HHB
 VALERIC-ACID SD WOI
 VALINE 5,700 SD WOI
 VANILLIC-ACID SD WOI
 VERBASCOSE SD WOI
 VERBASCOTETROSE SD WOI
 VITEXIN PL JSG
 WATER 36,000 SD
 XYLOSE SD WOI

THUJA OCCIDENTALIS L.

“ARBOR-VITAE;

NORTHERN WHITE-CEDAR”

ACETIC-ACID BR HHB
 ASCORBIC-ACID BR HHB
 (-)-BORNEOL BR HHB
 BORNYL-ACETATE BR 411/
 CAMPHENE BR HHB
 CAMPHOR BR 411/
 (+)-CATECHIN BR HHB
 D-CHIRO-INOSITOL BR HHB
 EO 6,000-10,000 BR WOI
 ALPHA-EUDES MOL WD WOI
 BETA-EUDES MOL WD WOI
 GAMMA-EUDES MOL WD WOI
 FAT 150,000 SD WOI
 L-ALPHA-FENCHENE BR 411/
 L-FENCHONE BR WOI
 FORMIC-ACID BR WOI
 INOSITOL BR HHB
 ISOTHUJONE BR 411/
 ISOVALERIC-ACID BR GEO
 JUNIPERIC-ACID BR HHB
 KAEMPFEROL-3-RHAMNOSIDE BR HHB
 L-LEUKANTHELMITOL BR HHB
 LIMONENE BR 411/
 MUCILAGE BR HHB
 MYOINOSITOL BR HHB
 MYRICETIN-3-GLYCOSIDE BR HHB
 MYRICETIN-3-RHAMNOSIDE BR HHB
 10-NONACOSANOL BR HHB
 OCCIDENTALOL WD WOI
 OCCIDION WD WOI
 OCCIDOL BR HHB
 OLEIC-ACID BR HHB
 PENTAHYDROXYFLAVONE-3'-BETA-GLYCOSIDE
 D-ALPHA-PINENE BR WOI
 PINITOL BR HHB
 PINOPICRIN BR HHB

PINOTANNIC-ACID BR HHB
 QUERCITRIN BR HHB
 QUINOVIGEC-ACID
 RESIN BR HHB
 RESINIC-ACID BR HHB
 RHODOXANTHIN LF HHB
 SABINENE BR HHB
 SABINIC-ACID BR HHB
 SEQUOYITOL BR HHB
 BETA-SITOSTEROL BR HHB
 TANNIN 59,000 BR HHB
 TERPINEOL BR HHB
 THAPSIC-ACID BR HHB
 ALPHA-THUJAPLICIN WD WOI
 BETA-THUJAPLICIN WD WOI
 L-ALPHA-THUJENE BR 411/
 D-ALPHA-THUJONE BR HHB
 VALERIANIC-ACID BR HHB

THYMUS CAPITATUS (L.)
 HOFFM.

“SPANISH THYME;
 SPANISH ORIGANUM”

ALLO-AROMADENDRENE PL BML
 AROMADENDRENE PL BML
 TRANS-ALPHA-BERGAMOTENE PL
 BML
 BETA-BISABOLENE 20-40 PL BML
 BORNEOL 20-330 PL BML
 BORNYL-ACETATE PL BML
 DELTA-CADINENE 10-70 PL BML
 CAMPHENE 10 PL BML
 CAMPHOR PL BML
 DELTA-3-CARENE 1-20 PL BML
 CARVACROL 6,700-7,900 PL BML
 CARVACRYL-ACETATE PL BML
 CARVENONE PL BML
 CARVONE PL BML
 CARYOPHYLLENE 300-310 PL BML
 CARYOPHYLLENE-OXIDE PL BML
 1,8-CINEOLE 10-30 PL BML
 P-CYMENE 10-550 PL BML
 P-CYMEN-8-OL 1-50 PL BML
 CIS-DIHYDROCARVONE 10 PL BML
 TRANS-DIHYDROCARVONE 10 PL BML
 FENCHONE PL BML
 GERANIAL PL BML
 GERANIOL 40 PL BML
 GERMACRENE-D 20-30 PL BML
 ALPHA-HUMULENE 10 PL BML
 ISOCARYOPHYLLENE PL BML
 ISOGERANIOL PL BML

LIMONENE 10-30 PL BML
 LINALOOL 30-180 PL BML
 1-METHYL-4-ISOPROPYL-4-(2-METHYL-
 5-ISOPROPYLPHENOXY)-CYCLO..
 GAMMA-MUUROLENE PL BML
 MYRCENE 150-180 PL BML
 NERAL PL BML
 3-OCTANOL PL BML
 1-OCTEN-3-OL 20-40 PL BML
 1-OCTEN-3-YL-ACETATE PL BML
 ALPHA-PHELLANDRENE 1-80 PL BML
 BETA-PHELLANDRENE PL BML
 ALPHA-PINENE 10-150 PL BML
 BETA-PINENE 10 PL BML
 SABINENE 1-10 PL BML
 TRANS-SABINENE-HYDRATE 30-60 PL
 BML
 ALPHA-TERPINENE 10-120 PL BML
 GAMMA-TERPINENE 490-530 PL BML
 ALPHA-TERPINEOL 10-20 PL BML
 TERPINOLENE 1-30 PL BML
 TERPINEN-4-OL 50-70 PL BML
 ALPHA-THUJENE 60-190 PL BML
 THYMOL 10-980 PL BML
 TRANS-P-MENTH-3-EN-9-AL PL BML

THYMUS MASTICHINA L.

“SPANISH MARJORAM”

ACETIC-ACID PL BML
 ALLO-AROMADENDRENE 90 PL BML
 AROMADENDRENE 20 PL BML
 BORNEOL 1-350 PL BML
 BORNYL-ACETATE 20 PL BML
 BETA-BOURBONENE 10 PL BML
 DELTA-CADINENE 5 PL BML
 GAMMA-CADINENE 5 PL BML
 CAMPHENE 20-140 PL BML
 CAMPHOR 1-450 PL BML
 CARYOPHYLLENE 130 PL BML
 CARYOPHYLLENE-OXIDE 1 PL BML
 1,8-CINEOLE 300-7,500 PL BML
 COPAENE 1 PL BML
 P-CYMENE 130-340 PL BML
 ELEMOL 1 PL BML
 GERANIOL 20 PL BML
 GERANYL-ACETATE 10 PL BML
 ALPHA-GURJUNENE 1 PL BML
 BETA-GURJUNENE 30 PL BML
 ISOVALERIC-ACID PL GEO
 LIMONENE 240-280 PL BML
 LINALOOL 850-7,890 PL BML
 LINALYL-ACETATE 100-150 PL BML
 LONGIFOLENE 1 PL BML

MYRCENE 20-90 PL BML
 CIS-NEROLIDOL 10 PL BML
 ALPHA-PINENE 260 PL BML
 BETA-PINENE 200-270 PL BML
 TRANS-PINOCARVEOL 75 PL BML
 TRANS-PINOCARVYL-ACETATE PL
 BML
 SABINENE 80-110 PL BML
 TRANS-SABINENE-HYDRATE 80-110 PL
 BML
 TERPINEN-4-OL 10-70 PL BML
 3-TERPINEN-1-OL 20 PL BML
 3-TERPINEN-1-YL-ACETATE 20 PL BML
 ALPHA-TERPINENE 1 PL BML
 GAMMA-TERPINENE 1-60 PL BML
 DELTA-TERPINEOL 1 PL BML
 TERPINOLENE PL BML
 TRANS-DIHYDRO-ALPHA-TERPINYL-
 ACETATE 1 PL BML
 ALPHA-TERPINEOL 210-800 PL BML
 CIS-BETA-TERPINEOL 1 PL BML
 TERPINOLENE 1 PL BML
 ALPHA-TERPINYL-ACETATE 310 PL
 BML
 CIS-BETA-TERPINYL-ACETATE 1 PL
 BML
 ALPHA-THUJENE 40 PL BML
 THYMOL 190 PL BML

THYMUS OROSPEDANUS H. del
 VILLAR

“OROSPED THYME”

BORNEOL 875 PL JNP
 BORNYL-ACETATE 158 PL JNP
 DELTA-CADINENE
 CAMPHENE 578 PL JNP
 CAMPHOR 718 PL JNP
 DELTA-3-CARENE PL JNP
 CARVACROL 2,730 PL JNP
 CARVACRYL-ACETATE PL JNP
 CARYOPHYLLENE 718 PL JNP
 P-CYMENE 3,939 PL JNP
 EO 17,500
 ALPHA-HUMULENE PL JNP
 LIMONENE 140 PL JNP
 LINALOOL 945 PL JNP
 MYRCENE 858 PL JNP
 BETA-OCIMENE PL JNP
 PHELLANDRENE PL JNP
 ALPHA-PINENE 665 PL JNP
 BETA-PINENE 1 PL JNP
 TERPINEN-4-OL 140 PL JNP

GAMMA-TERPINENE 3,920 PL JNP
 TERPINOLENE PL JNP
 ALPHA-THUJENE PL JNP
 THUJONE 1 PL JNP
 THYMOL 1,278 PL JNP

THYMUS SERPYLLUM L.

“CREEPING THYME”

APIGENIN PL HHB
 BETA-BISABOLENE 68-1,012 PL BML
 HHB
 BORNEOL 4-573 PL BML HHB WOI
 BORNYL-ACETATE PL HHB
 DELTA-CADINENE 8-152 PL BML HHB
 CAFFEIC-ACID 6,200 PL HHB
 CAMPHENE 1-19 PL BML HHB
 CARVACROL 318-10,505 PL BML HHB
 WOI
 CARYOPHYLLENE 135-2,292 PL BML
 HHB
 1,8-CINEOLE 1-38 PL BML HHB
 CITRAL PL HHB
 CITRONELLOL PL WOI
 P-CYMEN-8-OL 10-172 PL BML HHB
 P-CYMENE 237-3,285 PL BML HHB
 EO 1,500-19,100 PL HHB
 GERANIOL PL HHB
 GERANYL-ACETATE PL HHB
 GERMACRENE-D 3-573 PL BML HHB
 LIMONENE 3-57 PL BML HHB
 LINALOOL 8-134 PL BML HHB
 LINALYL-ACETATE PL BML
 LUTEOLIN-7-GLUCOSIDE PL HHB
 METHYL-CARVACROL 10-2,292 PL
 BML HHB
 METHYL-THYMOL 1-153 PL BML HHB
 MYRCENE 13-229 PL BML HHB
 NEROLIDOL PL HHB
 NERYL-ACETATE PL HHB
 3-OCTANOL TR BML
 1-OCTEN-3-OL 20-306 PL BML HHB
 OLEANOLIC-ACID 4,800 PL HHB
 ALPHA-PINENE 1-362 PL BML HHB
 BETA-PINENE 1-19 PL BML HHB
 ROSMARINIC-ACID SH 23,000
 APF48:103
 SABINENE 1-19 PL BML HHB
 SCUTELLAREIN PL HHB
 SCUTELLAREIN-HETEROSIDE PL WOI
 SERPYLLIN PL HHB
 TANNIN 50,000-75,000 PL HHB
 TERPINEN-4-OL 10-191 PL HHB
 ALPHA-TERPINENE 21-344 PL HHB

GAMMA-TERPINENE 252-3,534 PL HHB
 TERPINEOL PL HHB
 TERPINYL-ACETATE PL HHB
 ALPHA-THUJENE 15-306 PL BML HHB
 THYMOL 3-57 PL BML HHB
 UNDECANOIC-ACID PL HHB
 URSOLIC-ACID 7,500-9,100 PL HHB WOI
 ZINGIBERENE PL HHB

THYMUS VULGARIS L.

“COMMON THYME;
 GARDEN THYME”

ALANINE PL PAS
 ALUMINUM 920 LF PED
 AMYL-ALCOHOL 13,900 EO NAP
 ANETHOLE EO NAP
 APIGENIN PL PAS
 ASCORBIC-ACID 0 LF PED
 ASH 113,681-130,809 PL USA
 BORNEOL 15-1,462 LF ABS BML HHB
 L-BORNEOL PL WOI
 BORNYL-ACETATE 16-544 LF BML
 HHB
 BORON 34-48 PL BOB
 BETA-CADINENE EO NAP
 DELTA-CADINENE EO NAP
 CAFFEIC-ACID 16,900 LF NAP WOI
 CALCIUM 16,700 LF PED
 CALCIUM 16,935-22,534 PL USA
 CAMPHENE 15-270 PL BML HHB WOI
 CAPRIC-ACID 1,200-1,296 PL USA
 CAPRYLIC-ACID 2,400-2,592 PL USA
 CARBOHYDRATES 693,000 LF PED
 CAR-3-ENE 127-1,080 PL JAD NAP
 CAR-4-ENE PL NAP
 DELTA-3-CARENE 510 PL BML
 BETA-CAROTENE 24-25 PL CRC
 CARBOHYDRATE 639,400-690,552 PL
 USA
 CARVACROL 8-18,720 PL BML HHB
 JAD NAP
 CARVONE PL PAS
 BETA-CARYOPHYLLENE 71-605 PL JAD
 NAP
 CHLOROGENIC-ACID PL HHB
 CHROMIUM 20 LF PED
 CHRYSOERIOL PL PAS
 CIMUNYL-ALCOHOL EO NAP
 CINEOLE 80-4,590 PL ABS HHB
 CINNAMIC-ACID PL PAS
 CIRSILINEOL PL CCO
 CIRSIMARITRIN 20 LF NAP
 CITRAL PL PAS

COBALT 113 LF PED
 COPPER 8-9 PL USA
 COSMOSIIN LF NAP
 P-COUMARIC-ACID 420 LF NAP
 P-CYMENE 146-20,800 PL ABS HHB
 WOI
 P-CYMEN-8-OL PL NAP
 CYSTINE 1,370-1,980 PL USA 1/
 8-DEMETHYL-THYMONIN PL NAP
 4,4'-DIHYDROXY-5,5'-DI-ISO-PROPYL-
 2,2'-DIMETHYL-BIPHENYL-3,6-DIONE
 LF NAP
 4'5-DIHYDROXY-7-METHOXYFLAVONE
 43 LF NAP
 5,4'-DIHYDROXY-6,7,8,3'-
 TETRAMETHOXYFLAVONE PL CCO
 4'5-DIHYDROXY-3',6,7-
 TRIMETHOXYFLAVONE LF NAP
 4'5-DIHYDROXY-6,7,8-
 TRIMETHOXYFLAVONE 5.5 LF NAP
 DIOSMETIN PL PAS
 EO 4,000-34,000 PL WOI
 ERIODICTYOL PL PAS
 EUDESMOL EO NAP
 EUGENOL PL PAS
 FAT 69,480-80,000 PL USA WOI
 FAT 370,000-389,000 SD CRC WOI
 FERULIC-ACID PL PAS
 FIBER 179,294-693,000 PL CRC USA
 GALLIC-ACID PL PAS
 GERANIOL 0-10,660 PL ABS BML HHB
 GERANYL-ACETATE 0-3,380 PL ABS
 BML HHB
 GLYCINE PL PAS
 HEX-5-EN-1-OL EO NAP
 P-HYDROXYBENZOIC-ACID PL PAS
 P-HYDROXYBENZOIC-ACID-4-BETA-D-
 GLUCOSIDE LF NAP
 4-HYDROXYBENZOYL-GLUCOSE LF
 NAP
 4'-HYDROXY-5,5'-DI-ISO-PROPYL-2,2'-
 DIMETHYL-BIPHENYL-3,4-DIONE 9
 LF NAP
 5-HYDROXY-4',7-DIMETHOXYFLAVONE
 1 LF NAP
 ALPHA-HYDROXY-LINOLENIC-ACID
 SD WOI
 6-HYDROXY-LUTEIN PL CCO
 IRON 1,075-1,508 PL USA
 ISOBORNEOL EO NAP
 ISOCHLOROGENIC-ACID LF NAP
 ISOEUGENOL PL PAS
 ISOLEUCINE 4,680-5,054 PL USA
 ISOTHYMONIN PL NAP

- KAEMPFEROL PL PAS
 KILOCALORIES 2,990 LF PED
 LABIATIC-ACID LF PED
 LAURIC-ACID 2,300-2,484 PL USA
 LEUCINE 4,300-4,644 PL USA
 LIMONENE 15-5,200 PL ABS BML HHB
 LINALOOL 170-17,420 PL ABS BML JAD HHB NAP
 LINALYL-ACETATE 15-4,680 PL ABS BML HHB
 LINOLEIC-ACID SD WOI
 LINOLEIC-ACID 5,000-5,400 PL USA
 ALPHA-LINOLENIC-ACID 6,900-7,452 PL USA
 LINOLENIC-ACID SD WOI
 LITHIUM 4 PL HHB
 LITHOSPERMIC-ACID SH NAP
 LUTEOLIN PL HHB
 LUTEOLIN-7-DIGLUCOSIDE PL HHB
 LUTEOLIN-7-O-BETA-D-GLUCOSIDE PL PAS
 LYSINE 2,070-2,236 PL USA
 MAGNESIUM 4,360 LF PED
 MAGNESIUM 1,630-2,992 PL USA
 MANGANESE 64-79 LF PED USA
 MENTHONE PL PAS
 METHIONINE 1,370-1,980 PL USA
 8-METHOXY-CIRSILINEOL 7.4 LF NAP
 MYRCENE 36-676 PL ABS BML HHB
 MYRCENOL-8 15-3,900 PL ABS BML
 MYRCENOL-8-ACETATE 15-2,600 PL ABS BML HHB
 MYRISTIC-ACID 1,500-1,620 PL USA
 NARINGENIN PL PAS
 NEROLIDOL 80 PL BML
 NIACIN 54 PL CRC
 OCIMENE EO NAP
 OLEANOLIC-ACID 6,300 PL HHB
 OLEIC-ACID SD WOI
 OLEIC-ACID 4,700-5,076 PL USA
 PALMITIC-ACID 17,200-18,576 PL USA
 ALPHA-PHELLANDRENE 50-425 PL JAD NAP
 BETA-PHELLANDRENE PL NAP
 PHENYLALANINE 2,410-2,603 PL USA
 PHOSPHORUS 950 LF PED
 PHOSPHORUS 1,703-2,502 PL USA
 PHYTOSTEROLS 1,630-1,760 PL USA
 ALPHA-PINENE 15-1,598 PL ABS BML HHB
 BETA-PINENE 15-420 PL ABS BML HHB
 PLANTEOSE SD NAP
 POTASSIUM 9,680 LF PED
 POTASSIUM 7,667-9,302 PL USA
 PROTEIN 99,000 PL CRC
 PROTOCATECHUIC-ACID-4-BETA-D-GLUCOSIDE LF NAP
 RESIN PL WOI
 RIBOFLAVIN 4-53 PL CRC USA
 ROSMARINIC-ACID 5,000-13,500 SH JAD NAP
 ROSMARINIC-ACID 26,000 PL FT62:166
 SALICYLIC-ACID-2-BETA-D-GLUCOSIDE LF NAP
 SELENIUM 16 LF PED
 SILICON 202 LF PED
 SODIUM 1,490 LF PED
 SODIUM 430-1,341 PL CRC
 SYRINGIC-ACID-4-BETA-D-GLUCOSIDE LF NAP
 SYRINGOYL-GLUCOSE LF NAP
 TANNIN 80,000-100,000 PL HHB WOI
 ALPHA-TERPINENE PL NAP
 GAMMA-TERPINENE 36-5,460 PL ABS BML HHB
 4-TERPINEOL 73-8,320 PL ABS BML HHB WOI
 ALPHA-TERPINEOL 36-6,500 PL ABS BML HHB
 BETA-TERPINEOL 79-673 PL JAD NAP
 GAMMA-TERPINEOL PL NAP
 3,3',4,4'-TETRAHYDROXY-5,5'-DI-ISO-PROPYL-2,2'-DIMETHYL-BIPHENYL 35 LF NAP
 3,3',4,4'-TETRAONE-5,5'-DI-ISO-PROPYL-2,2'-DIMETHYL-BIPHENYL 3 LF NAP
 THIAMIN 5-6 PL CRC
 THREONINE 2,520-2,722 PL USA
 THYMOL 15-24,100 PL ABS BML HHB
 THYMOL-METHYL-ETHER 1-10,000 PL HHB
 THYMONIN LF NAP
 THYMUNIC-ACID PL WOI
 THYMUSAPONIN PL WOI
 TIN 17 LF PED
 TRANS-4-THUJANOL
 N-TRIACONTANE PL HHB
 3,4,4'-TRIHYDROXY-5,5'-DI-ISO-PROPYL-2,2'-DIMETHYL-BIPHENYL 1 LF NAP
 2,6,6-TRIMETHYL-BICYCLO(3,1,1)-HEPTA-2-ENE EO NAP
 TRYPTOPHAN 1,860-2,009 PL USA
 TYROSINE 2,410-2,603 PL USA
 URSOLIC-ACID 15,000-18,800 PL HHB WOI
 VALINE 5,020-5,422 PL USA
 VANILLIC-ACID PL PAS

VANILLIC-ACID-4-BETA-D-GLUCOSIDE
 LF NAP
 WATER 832,000 LF PED
 WATER 74,111-81,690 PL USA
 ZINC 15 LF PED
 ZINC 55-74 PL USA

TILIA SP

“LINDEN; BASSWOOD; LIME”

AFZELIN FL HHB
 ALANINE FL HHB
 BETA-AMYRIN LF HHB
 ASCORBIC-ACID LF HHB
 ASH 21,000-66,000 FR CRC
 ASH 114,000-130,000 FR CRC
 ASPARAGINE FR HHB
 ASTRAGALIN FL HHB
 CAFFEIC-ACID FL HHB
 CARBOHYDRATES 232,000-727,000 FR
 CRC
 CARBOHYDRATES 575,000-653,000 LF
 CRC
 CHLOROGENIC-ACID FL HHB
 P-COUMARIC-ACID FL HHB
 CYSTEINE FL HHB
 CYSTINE FL HHB
 DOCOSANE FL HHB
 EICOSANE FL HHB
 EUGENOL FL HHB
 CIS-TRANS-FARNESOL FL HHB
 CIS-TRANS-FARNESYL-ACETATE FL
 HHB
 FAT 30,000-580,000 FR CRC
 HHB
 FAT 29,000-33,000 LF CRC
 FIBER 135,000-423,000 FR CRC
 FIBER 132,000-150,000 LF CRC
 GERANIOL FL HHB
 GERANYL-ACETATE FL HHB
 GLUTAMIC-ACID FR HHB
 GLYCINE FR HHB
 HENEICOSANE FL HHB
 HENTRIACONTANE FL HHB
 HEPTACOSANE FL HHB
 HESPERIDIN FL HHB
 HEXACOSANE FL HHB
 ISOLEUCINE FL HHB
 ISOQUERCITRIN FL HHB
 KAEMPFERITRIN FL CCO
 KAEMPFEROL-3-(P-
 COUMAROYLGLUCOSIDE) FL HHB
 KAEMPFEROL-3-GLUCO-7-
 RHAMNOSIDE FL HHB

KAEMPFEROL-3,7-DIRHAMNOSIDE
 FL HHB
 LEUCINE FL HHB
 LIMONENE FL HHB
 LINALOOL FL HHB
 LINALYL-ACETATE FL HHB
 LINARIN LF HHB
 LINOLEIC-ACID WD HHB
 LINOLENIC-ACID WD HHB
 MUCILAGE FL HHB
 NEROL FL HHB
 NEROLIDOL FL HHB
 NONADECANE FL HHB
 OCTACOSANE FL HHB
 OCTADECANE FL HHB
 OLEIC-ACID WD HHB
 PALMITIC-ACID WD HHB
 PENTACOSANE FL HHB
 PHENYLALANINE FL HHB
 2-PHENYLETHANOL FL HHB
 2-PHENYLETHYLBENZOATE FL
 HHB
 2-PHENYLETHYLPHENYLACETATE FL
 HHB
 PHLOBAPHENE LF HHB
 ALPHA-PINENE FL HHB
 PROTEIN 36,000-113,000 FR CRC
 PROTEIN 162,000-184,000 LF CRC
 QUERCETIN FL 411/
 QUERCETIN-3-GLUCOSIDE-7-
 RHAMNOSIDE FL HHB
 QUERCETIN-RHAMNOSIDE-XYLOSIDE
 FL HHB
 QUERCITRIN FL HHB
 SAPONIN FL HHB
 SERINE FL HHB
 BETA-SITOSTEROL WD HHB
 SQUALENE WD HHB
 STIGMASTEROL WD HHB
 STIGMASTANOL WD HHB
 SUCROSE WD HHB
 SUGAR FL HHB
 TANNIN FL HHB
 TARAXEROL BK HHB
 TERPINEOL FL HHB
 TETRACOSANE FL HHB
 TILIROSIDE FL 411/
 TOCOPHEROL FL HHB
 TRIACONTANE FL HHB
 TRICOSANE FL HHB
 TYROSINE FR HHB
 VALINE FR HHB
 VANILLIN FL HHB
 WATER 681,000 FR CRC

WATER 120,000 LF CRC
XANTHOPHYLL LF HHB

TRACHYSPERMUM AMMI (L.)
SPRAGUE EX TURRILL

“AJWAN”

ASH 79,000-85,313 FR WOI
CALCIUM 15,250-16,469 FR WOI
CAMPHENE 150-252 FR
CARBOHYDRATES 246,000-265,658 FR
WOI
DELTA-3-CARENE 126-320 FR
CAROTENE .710-.768 FR WOI
CARVACROL 1,350-2,720 FR
CHROMIUM 30-31 FR ABS 5/
COBALT 0.7 FR ABS 5/
COPPER 9.1 FR ABS 5/
P-CYME NE 6,240-9,512 FR
DIPENTENE FR HHB
EO 20,000-60,000 FR HHB WOI
EO 15,200 PL WOI
FAT 218,000-334,773 FR HHB WOI
FIBER 212,000-228,942 FR WOI
IODINE 0.45 FR WOI
IRON 178-299 FR WOI ABS 5/
LIMONENE 75-2,040 FR
MANGANESE 33.1 FR ABS 5/
MYRCENE 90-120 FR
NICKEL 1.2 FR ABS 5/
NICOTINIC-ACID 21-23 FR WOI
ALPHA-PHELLANDRENE PL WOI
BETA-PHELLANDRENE PL WOI
PHENOLS 3,800 PL WOI
PHOSPHORUS 4,430-4,784 FR WOI
PHYTIN-PHOSPHORUS 2,960-3,197 FR
WOI
ALPHA-PINENE 99-720 FR
BETA-PINENE 372-1,400 FR
POTASSIUM 13,900-15,011 FR WOI
PROTEIN 150,000-184,665 FR HHB
WOI
RIBOFLAVIN 2.8-3.0 FR WOI
SODIUM 560-605 FR WOI
GAMMA-TERPINENE 5,610-
13,960 FR
THIAMIN 2.1-2.3 FR WOI
THYMOL 3,633-33,000 FR HHB WOI
THYMOL 13,560-19,400 FR
WATER 74,000 FR WOI
ZINC 43 FR ABS 5/

5/ Abs=Pak.J.Sci.Ind.Res.28:234.1985

TRAGOPOGON PORRIFOLIUS L.

“SALSIFY”

ALUMINUM 56 RT WOI
ARSENIC 0.11 RT WOI
ASCORBIC-ACID 80-491 RT WOI JAD
CALCIUM 480-2,610 RT JAD WOI
CAOUTCHOUC 2,000 RT WOI
CARBOHYDRATE 186,000-888,000 RT
JAD
BETA-CAROTENE 0-0.268 RT JAD
CHLORINE 460 RT WOI
COPPER 1 RT WOI
9,10-EPOXYSTEARIC-ACID
FAT 2,000-39,150 RT JAD WOI
FIBER 2,000-78,300 RT JAD WOI
GUM 10,000 SD WOI
HYDROXYDIEN-ACID
INULIN RT WOI
IRON 7-67 RT JAD WOI
ISOORIENTIN
ISOVITEXIN
LUCENIN-1
LUTEOLIN
MAGNESIUM 140-1,000 RT WOI JAD
MANGANESE 12 RT WOI
NIACIN 5-22 RT JAD
ORIENTIN
PHOSPHORUS 500-3,262 RT JAD WOI
POTASSIUM 1,830-16,964 RT JAD WOI
PROTEIN 14,000-143,550 RT JAD WOI
PROTEIN 177,000 SD JAD
QUERCITRIN
RIBOFLAVIN 1-10 RT JAD
SODIUM 80-870 RT WOI
SULFUR 250 RT WOI
THIAMIN 1-3 RT JAD
VICENIN-1
VICENIN-2
VITEXIN
WATER 768,000-776,000 RT JAD
ZINC 2 RT WOI

TRICHOSANTHES ANGUINA L.

“SNAKEGOURD”

ASCORBIC-ACID 0 FR WOI
ASH 5,000-92,590 FR CRC
CALCIUM 500-9,260 FR CRC
CARBOHYDRATE 41,000-759,250 FR
CRC
BETA-CAROTENE 1-18 FR CRC

CHLORINE 210-3,890 FR WOI
 CHONDRILLASTEROL PL WOI
 COPPER 1.1-20 FR CRC
 ALPHA-ELAEOSTEARIC-ACID 92,450 SD WOI
 FAT 3,000-55,555 FR CRC
 FAT 321,000 SD WOI
 FIBER 8,000-148,000 FR CRC
 IODINE 0.01-0.2 FR WOI
 IRON 11-200 FR CRC
 LINOLEIC-ACID 49,500 SD WOI
 MAGNESIUM 530-9,815 FR WOI
 NIACIN 3-56 FR CRC
 OLEIC-ACID 83,450-107,535 SD WOI
 OXALIC-ACID 10-340 FR WBB WOI
 PALMITIC-ACID 7,060-9,000 SD WOI
 PHOSPHORUS 200-3,700 FR CRC
 POTASSIUM 340-6,300 FR CRC
 PROTEIN 5,000-92,590 FR CRC
 PUNICIC-ACID 130,000 SD WOI
 RIBOFLAVIN 0.6-11 FR CRC
 SODIUM 250-4,630 FR CRC
 STEARIC-ACID 30,500-41,100 SD WOI
 SULFUR 350-6,480 FR WOI
 THIAMIN 0.4-7.4 FR CRC
 WATER 946,000 FR CRC

TRICHOSANTHES KIRILOVII L.

“CHINESE CUCUMBER”

CAMPESTEROL SD CCO
 COMPOUND-Q RT ABS
 DELTA-7-CAMPESTEROL SD CCO
 24-ETHYL-5ALPHA-CHOLESTA-5,25-DIEN-3-BETA-OL PL JSG
 24-ETHYLCHOLESTA-7,24(25)-DIEN-3-BETA-OL PL JSG
 24-ETHYL-5ALPHA-CHOLESTA-7,25-DIEN-3-BETA-OL SD CCO
 24-ETHYL-5ALPHA-CHOLESTA-7,22,25-TRIEN-3-BETA-OL SD JSG
 LINOLEIC-ACID SD CCO
 LINOLENIC-ACID SD CCO
 OLEIC-ACID SD CCO
 SAPONINS RT CCO
 BETA-SITOSTEROL RT CCO
 ALPHA-SPINASTEROL SD CCO
 ALPHA-SPINASTEROL-6'-(Z,Z)-9,12-OCTADECADIENOYL-BETA-D-GLUCOPYRANOSIDE RT CCO
 ALPHA-SPINASTEROL-PALMITATE RT CCO

ALPHA-SPINASTEROL-6'-PALMITYL-BETA-D-GLUCOPYRANOSIDE RT CCO
 ALPHA-SPINASTERYL-BETA-D-GLUCOSIDE RT CCO
 DELTA-7-STIGMASTENOL SD CCO
 DELTA-7-STIGMASTENOL-6'-PALMITYL-BETA-D-GLUCOPYRANOSIDE RT CCO
 DELTA-7-STIGMASTENOL-6'-(Z,Z)-9,12-OCTADECADIENOYL-BETA-D-GLUCOPYRANOSIDE RT CCO
 STIGMASTEROL RT CCO
 7-STIGMASTEROL RT JSG
 STIGMASTA-7,22-DIEN-3BETA-OL PL JSG
 ALPHA-TRICHOSANTHIN RT EMP2:74
 TRICHOSANTHIN RT CCO

TRIFOLIUM PRATENSE L.

“RED CLOVER”

ALLANTOIN SP
 ALLANTOIC-ACID
 ALUMINUM 137 FL PED
 ARGININE
 ASCORBIC-ACID 2,966 FL PED
 ASH 85,000 FL PED
 ASH 41,000 SD JEL
 ASH 79,000 SH JAD JEL
 L-ASPARAGINE PL JSG
 ASPARAGINIC-ACID
 BENZYL-ACETATE
 BENZYL-ALCOHOL
 BENZYL-FORMIATE
 BIOCHANIN-A FL 411/
 BIOCHANIN-A 8,000 PL ABS
 BORON 23 LF JPN14:613
 BORON 16 ST JPN14:613
 CAFFEIC-ACID FL 411/
 CALCIUM 4,800-22,900 SH JAD JEL WOI
 CALCIUM 13,100 FL PED
 CALYCOSIN
 CAMPESTEROL
 CARBOHYDRATES 763,000 FL PED
 CARBOHYDRATES 743,000 SH JEL
 BETA-CAROTENE 12 FL PED
 CHLOROGENIC-ACID PL JSG
 CHOLINE
 CHROMIUM 32 FL PED
 CLOVAMIDE
 COBALT 18 FL PED
 COPPER 7-18 HAY

- P-COUMARIC-ACID PL JSG
 COUMARIN FL 411/
 3-P-COUMAROYLQUININE PL JSG
 COUMESTROL FL 411/
 CYANIDIN
 DAIDZEN
 DAIDZEIN FL 411/
 DAIDZEN-GLYCOSIDE
 DELPHINIDIN
 DEMETHYLPTEROCARPAN PL JSG
 L-DOPA-CAFFEIC-ACID-CONJUGATE
 FL 411/
 EO 280 FL
 EUGENOL FL
 FAT 36,000 FL PED
 FAT 85,000 SD JEL
 FAT 11,000-36,000 SH JEL WOI
 FIBER 99,000 FL PED
 FIBER 77,000-301,000 SH JAD JEL WOI
 FLAVANOIDS HAY
 FORMONONETIN 800-7,000 PL ABS
 FORMONONETIN FL 411/
 FUFURAL FL 411/
 FURFUROL
 GENISTEIN PL ABS 411/
 7-BETA-D-GLUCOSYL-5-,7-
 DIHYDROXY-4'-
 METHOXYISOFLAVONE
 GLUTAMIC-ACID
 HENTRIACONTANE FL WOI
 N-HEPTACOSANE FL WOI
 HISTIDINE
 HOMOPISATIN
 HOMOSERINE
 6-ALPHA-HYDROXYMAACKIAIN
 6-ALPHA-HYDROXYMEDICARPIN
 IONONE FL
 IRON 0.35 FL PED
 IRON 10-1,850 SH JAD
 ISOLEUCINE
 ISORHAMNETIN PL JSG
 ISORHAMNETIN-GLYCOSIDE
 ISOTRIFOLIN FL WOI
 ISORHAMNETIN FL WOI
 ALPHA-KETOGLUTARIC-ACID
 LEUCINE
 LYSINE
 MAACKIAIN
 MAGNESIUM 3,490 FL PED
 MAGNESIUM 2,400-8,100 HAY
 MALTOSE LF
 MALVIDIN FL
 MANGANESE 59 FL PED
 MANGANESE 25-464 HAY
 MEDICAGOL FL 411/
 MEDICARPIN
 METHIONINE
 METHYL-ANTHRALINATE FL
 METHYL-N-METHYL-ANTHRALINATE
 FL
 METHYL-SALICYLATE FL
 MOLYBDENUM 0.12 ST JPN14:613
 MOLYBDENUM 0.15 ST JPN14:613
 MYRICETIN SD
 MYRICYL-ALCOHOL FL WOI
 NIACIN 125 FL PED
 ONONIN
 OROBOL-4'-METHYLETHER
 OXALIC-ACID
 PAEONIDIN FL
 PECTOLINARIN FL 411/
 PHASEOLIC-ACID
 PHENYLALANINE
 PHOSPHORUS 3,220 FL PED
 PHOSPHORUS 900-4,500 SH JAD JEL
 WOI
 PIPECOLIC-ACID
 PISATIN LF
 POTASSIUM 20,000 FL PED
 POTASSIUM 5,400-26,700 SH JAD JEL
 WOI
 PRATENOL
 PRATENSEIN FL 411/
 PRATENSOL FL WOI
 PRATOL FL WOI
 PROTEIN 115,000 FL PED
 PROTEIN 41,000-280,000 SH JAD JEL
 WOI
 PROTEIN 360,000-380,000 SD JAD
 PSEUDOBAPTIGENIN
 RESIN
 RHAMNOSE
 RIBOFLAVIN 3.3 FL PED
 SALICYLIC-ACID FL
 SELENIUM 7.7 FL PED
 SELENIUM 0.024 LF JPN14:613
 SELENIUM 0.018 ST JPN14:613
 SERINE
 SILICON 12 FL PED
 BETA-SITOSTEROL FL WOI
 SITOSTEROL-BETA-D-GLUCOSIDE
 SODIUM 160 FL PED
 SOYASAPOGENOLS PL JSG
 THIAMIN 4.2 FL PED
 THREONINE
 TIN 25 FL PED
 ALPHA-TOCOPHEROL 126-400 IN
 WHITE CLOVER

TRIFOLIOLANOL
 TRIFOLIIN FL 411/
 TRIFOLITIN
 TRIFOLIRHIZIN FL WOI
 TRIFOLIRHIZIN-GLUCOSIDE
 TRIFOSIDE FL 411/
 TRYPTOPHAN PL JSG
 TYROSINE
 VALINE
 WATER 823,000 FL PED
 ZINC TR FL PED

abs=Acta Agrobot 41(1):77.1988 & Acta
 Bot. Yunn 12(4):427.1990

*TRIGONELLA FOENUM-
 GRAECUM L.*

“FENUGREEK”

7-ACETOXY-4-METHYLCOUMARIN
 ACETYLCOLINE
 ALANINE 8,720-11,220 SD USA
 EFN26:71
 ALUMINUM 350 SD PED
 GAMMA-AMINOBUTYRIC-ACID
 ARABINOSE SD
 ARACHIDIC-ACID SD
 ARGININE 22,230-27,115 SD USA
 EFN26:71
 ASCORBIC-ACID 27-36 (-600) SD PED
 USA
 ASCORBIC-ACID 520 LF
 ASH 39,000 SD PED
 ASPARTIC-ACID 23220-29,790 SD USA
 EFN26:71
 BEHENIC-ACID
 BIOTIN SP WOI
 CALCIUM 730-2,000 SD PED USA
 CALCIUM 12,900 LF
 CARBOHYDRATES 591,000 SD PED
 BETA-CAROTENE 0-1 SD USA WOI
 BETA-CAROTENE 23-278 LF
 CARPAINE SD 411/
 CHOLINE 500 SD
 CHOLINE 13,500 LF WOI
 CHLORINE 500 SD
 CHLORINE 1,650 LF
 CHROMIUM 4 SD PED
 COBALT 18 SD PED
 COPPER 3 LF
 COPPER 11 SD USA
 P-COUMARIC-ACID ST
 COUMARIN HYPOGLYCEMIC
 CYANOCOBALAMIN SP

CYSTINE 2,430-4,059 SD USA EFN26:71
 DIGALACTOSYLMYOINOSITOL
 DIHYDROACTINIDIOLIDE SD 411/
 DIHYDROBENZOFURAN SD 411/
 DIOSCIN SD
 DIOSGENIN 3,300-19,000 SD
 ELEMENE SD 411/
 ENDO-BETA-MANNANASE
 FAT 62,470-72,300 SD USA
 FENUGREEKINE 98-267 PL JSG
 FIBER 10,000-120,945 SD USA WOI
 FOLACIN 1
 FOLIC-ACID 1
 FRUCTOSE
 GALACTINOL
 GALACTOMANNAN
 ALPHA-GALACTOSIDASE
 GENTIANINE SD 411/
 GITOGENIN 100 SD
 GLUTAMIC-ACID 39,880-43,870 SD USA
 EFN26:71
 GLYCINE 10,630-14,366 SD EFN26:71
 GRAECUNIN-H...
 GRAECUNIN-N
 HISTIDINE 4,850-7,350 SD USA EFN26:71
 HOMOOIENTIN
 3-HYDROXY-4,5-DIMETHYL-2-
 FURANONE SD 411/
 4-HYDROXYISOLEUCINE 900 SD
 4-HYDROXYISOLEUCINE-LACTONE 40
 SD
 IRON 70-560 SD PED USA
 ISOLEUCINE 10,710-13,650 SD USA
 EFN26:71
 ISOVITEXIN SD 411/
 KAEMPFEROL PL JSG
 KILOCALORIES 2,570-3,400 SD PED
 EFN26:71
 LECITHIN
 LEUCINE 16,160-19,327 SD USA
 EFN26:71
 LIGNIN 280,000
 LUTEOLIN SD 411/
 LYSINE 15,310-18,525 SD USA EFN26:71
 MAGNESIUM 1,210-2,780 SD PED USA
 MANGANESE 12-21 SD PED USA
 D-MANNOSE
 BETA-MANNANAN
 ALPHA-MANNOSIDASE
 METHIONINE 120-8,830 LF
 METHIONINE 3,120-3,720 SD USA
 EFN26:71
 4-METHYL-7-ACETOXYCOUMARIN ST
 MUCILAGE 180,000-280,000 SD

MUCIN 280,000 SD
 MUUROLENE SD 411/
 MYOINOSITOL
 NEOTIGOGENIN SD
 NIACIN 13-20 SD USA
 NICOTINIC-ACID 30-35 SD
 OLEIC-ACID SD
 ORIENTIN SD 411/
 ORIENTIN-ARABINOSIDE
 PALMITIC-ACID
 PHENYLALANINE 10,320-11,980 SD USA
 EFN26:71
 PHOSPHORUS 1,290-4,285 SD USA WOI
 POTASSIUM 2,805-10,200 SD PED USA
 WOI
 PROLINE 11,980-17,800 SD USA
 EFN26:71
 PROTEIN 227,000-398,000 SD CRC USA
 WOI
 PROTOPECTIN
 PYRIDOXINE
 QUERCETIN SD 411/
 RAFFINOSE
 RIBOFLAVIN 3-4 SD PED
 RUTIN LF
 SAPONIN
 SELENINE SD 411/
 SELENIUM 16 SD USA
 SERINE 12,150-13,365 SD USA EFN26:71
 SILICON 47 SD PED
 BETA-SITOSTEROL PL JSG
 SODIUM 650-761 LF
 SODIUM 220-915 SD USA WOI
 25-ALPHA-SPIROSTA-3,5-DIENE SD
 STACHYOSE SD
 STEARIC-ACID SD
 SUCROSE SD
 SULFUR 1,670
 THIAMIN 3-14 SD PED USA
 THREONINE 8,980-9,880 SD USA
 EFN26:71
 TIGOGENIN SD 411/
 TIN 4 SD PED
 TRIGONELLINE 1,300 SD
 TRIGOFOENOSIDES PL JSG
 TRIGOFORIN
 TRIGONELLOSIDES PL JSG
 TRILLIN SD
 3,4,7-TRIMETHYLCOUMARIN ST
 TRYPTOPHAN 2,800-4,300 SD USA
 EFN26:71
 TYROSINE 6,410-8,400 SD USA
 EFN26:71
 VALINE 9,410-12,120 SD USA EFN26:71

VERBASCOSE
 VICENIN-1
 VICENIN-2
 VITEXIN ST
 VITEXIN-2'-O-P-COUMARATE
 VITEXIN-7-GLUCOSIDE
 WATER 86,000-90,750 SD USA
 XANTHOPHYLL 400 LF
 XYLOSE
 YAMOGENIN SD 411/
 YAMOGENIN-3,26-BIGLYCOSIDE PL
 JSG
 YAMOGENIN-TETROSIDES PL JSG
 ZINC TR-28 SD PED USA

TRIPTERYGIUM WILFORDIUM
 HOOK. F.

“YELLOW VINE”

CELABENZINE PL JSG
 CELAFAURINE PL JSG
 CELASTROL PL JSG
 (-)-LIRIORESINOL PL JSG
 NEOTRIPTOPHENOLIDE PL JSG
 (+)-SYRINGARESINOL PL CCO
 TRIPDIOLIDE PL JSG
 TRIPTERIGINE PL ALK
 TRIPTOLIDE RT ALK
 TRIPTOLIDENOL PL JSG
 TRIPTONIDE PL JSG
 TRIPTONOLIDE PL JSG
 TRIPTONOTOTERPENE PL JSG
 TRIPTONOTOTERPENE-METHYL-ETHER
 PL JSG
 TRIPTOPHENOLIDE PL JSG
 TRIPTOPHENOLIDE-METHYL-ETHER
 PL JSG
 WILFODEINE RT ALK
 WILFORDINE RT ALK
 WILFORGINE RT ALK
 WILFORINE RT ALK
 WILFORLIDES PL JSG
 WILFORTINE RT ALK
 WILFORZINE RT ALK

TRITICUM AESTIVUM L.

“WHEAT”

ADENINE PE NAP
 ADENOSINE PE NAP
 ALANINE 3,036-3,542 SD WOI
 ALBUMIN 30,000-50,000 SD HHB
 ALLANTOIN EM NAP

1,3-AMINO-PROPYL-PYRROLINIUM SP
 NAP
 AMMONIALYASE SD WOI
 ALPHA-AMYLASE SD WOI
 BETA-AMYLASE SD WOI
 ALPHA-AMYRIN SD NAP
 BETA-AMYRIN SD NAP
 APIGENIN SD WOI
 ARABINOSE ST HHB
 ARGININE 4,000-12,000 SD CCG
 ARSENIC 0.079 SD HAM33(4):42
 ASCORBIC-ACID TR SD PED 1/
 ASH 4,000-12,000 (56,000) SD CCG (PED)
 ASPARAGINE-SYNTHESASE SD WOI
 ASPARTIC-ACID 5,106-5,957 SD WOI
 BENZALDEHYDE SH NAP
 2(3)-BENZOXAZOLINONE RT NAP
 BETAINE 82 RT
 BETAINE 1,640 SH
 BIOTIN 216 SD NAP
 BORON 1-16 SD BOB
 CAFFEIC-ACID 3-4 SD CRC(FNS)
 CADMIUM 0.252 SD HAM33(4):42
 CALCIUM 900-10,400 PL CCG
 CALCIUM 100-4,100 SD CCG
 CAMPESTEROL-3-O-BETA-D-GLU-
 COSIDE SD NAP
 CAPRIC-ACID SD HHB
 CARBOHYDRATES 610,000 SD PED
 ALPHA-CARBOXYLASE SD WOI
 CAROTENE 97-953 PL CCG
 BETA-CAROTENE 0-0.22 SD CCG
 CATALASE SP NAP
 CEPHALIN SD HHB
 CHLORINE 670-3,400 PL CCG
 CHLORINE 300-1,800 SD CCG
 2'-CHLORO-DIAZEPAM 0.02 NG/G SD
 NAP
 2'-CHLORO-N-DEMETHYL-DIAZEPAM
 0.2 NG/G SD NAP
 CHLOROGENIC-ACID 5 SD CRC(FNS)
 CHLOROPHYLL-A PL PAS
 CHLOROPHYLL-B PL PAS
 CHOLINE 530-1,800 (-2,600) SD CCG
 WOI
 CHOLINE 48 RT NAP
 CHOLINE 121 SH NAP
 CITRININ SD NAP
 COBALT 0.03-0.15 PL CCG
 COBALT 0.06-0.15 SD CCG
 COPPER 2.2-4 PL CCG
 COPPER 1.1-16.7 SD CCG
 O-COUMARIC-ACID 5-10 SD CRC(FNS)
 P-COUMARIC-ACID 17-25 SD CRC(FNS)
 CYSTEINE 1,242-1,449 SD WOI
 CYSTINE 1,242-4,000 SD CCG WOI
 CYTOCHROME-C
 DECANAL SH NAP
 DEC-TRANS-2-EN-1-AL SH NAP
 DECHLORO-DIAZEPAM 0.1 NG/G SD
 NAP
 4-DECYL-PENTA-TRANS-2,4-DIENAL
 1.5SH NAP
 N-DEMETHYL-DIAZEPAM 0.3-0.4 NG/G
 SD NAP
 DHURRIN SP NAP
 DIAMINO-PROPANE SP NAP
 DIAZEPAM 0.1-0.3 NG/G SP NAP
 1,3-DIFERULOYL-GLYCEROL RT NAP
 DIGALACTOSYLDIGLYCERIDE SD HHB
 DIHYDROERGOSTEROL SD WOI
 GAMMA-DIHYDROSITOSTEROL-
 FERULIC-ACID-ESTER SD HHB
 2-(2,4-DIHYDROXY-1-4(2H)-
 BENZOXAZIN-3-(4H)ON)-BETA-D-
 GLUCOSIDE SP NAP
 2-(2,4-DIHYDROXY-7-METHOXY-1-
 4(2H)-BENZOXAZIN-3-(4H)ON)-BETA-
 D-GLUCOSIDE SP NAP
 ALPHA-DIHYDROXYCAROTENE 1 SD
 WOI
 ERGOSTEROL 12 SD WOI
 ESTERASE SP NAP
 ETHYL-BETA-D-FRUCTOFURANOSIDE
 SD HHB
 FAT 10,000-30,000 PL CCG
 FAT 8,000-39,000 SD CCG
 FERULIC-ACID 15-32 SD CRC(FNS)
 FIBER 23,300-421,000 PL CCG
 FIBER 3,000-62,000 SD CCG PED
 FOLIC-ACID 0-0.9 SD CCG
 FRUCTOSE 600 SD HHB WOI
 FRUCTOSYLAFFINOSE SD HHB
 GADUSEN SD WOI
 1-O-(6-O-ACYL-BETA-D-
 GALACTOPYRANOSYL)-2,3-DI-O-
 ACYL-D-GLY..
 GENTISIC-ACID 2-4 SD CRC(FNS)
 GIBBERELLINS SD NAP
 GLIADIN SD WOI
 GLOBULIN 60,000-100,000 SD HHB
 GLUCODIFRUCTOSE 4,100 SD WOI
 GLUCOFRUCTANS 10,300 SD WOI
 GLUCOSE 900 SD WOI
 GLUCOSE-6-PHOSPHATE-DEHYDROGE-
 NASE SP NAP
 GLUTAMATE-DEHYDROGENASE SP
 NAP

- GLUTAMIC-ACID 48,990-57,155 SD WOI
 GLUTAMIC-ACID-DECARBOXYLASE SD WOI
 GLUTAMIC-DEHYDROGENASE SD WOI
 GLUTATHIONE-REDUCTASE SD WOI
 GLUTENIN 300,000-400,000 SD HHB
 GLUTAMIC-ACID 39,000-63,000 SD CCG
 GLYCERIN SD HHB
 GLYCEROPHOSPHATASE SD WOI
 GLYCINE 4,830-5,635 SD WOI
 GLYCOLATE-OXIDASE PL NAP
 GRAMINE LF NAP
 GUANINE PE NAP
 GUANOSINE PE NAP
 HEMICELLULOSE-B HA NAP
 HEPTANAL SH NAP
 HEPTAN-1-OL SH NAP
 HEPT-TRANS-2-EN-1-AL SH NAP
 HEXAN-1-AL SH NAP
 HEX-TRANS-2-EN-1-AL SH NAP
 HEX-TRANS-2-EN-1-OL SH NAP
 HEXOKINASE SD WOI
 HEXOSE-DIPHOSPHATASE SD WOI
 HISTIDINE 1,000-6,000 SD CCG
 HYDROXAMIC-ACID LF NAP
 P-HYDROXYBENZOIC-ACID 5-10 SD CRC(FNS)
 3-HYDROXY-2'-CHLORO-DIAZEPAM 0.04 NG/G SD NAP
 2-(2-HYDROXY-4,7-DIMETHOXY-1-4(2H)-BENZOXAZIN-3-ONE-BETA-D-GLUCOSIDE LF NAP
 2-(2-HYDROXY-7-METHOXY-1-4(2H)-BENZOXAZIN-3-(4H)ON)-BETA-D-GLUCOSIDE SP NAP
 INOSITOL SD WOI
 BETA-IONONE PL PAS
 IRON 70-770 PL CCG
 IRON 10-120 SD CCG
 ISOCHLOROGENIC-ACID 1 SD CRC(FNS)
 ISOCITRATE-DEHYDROGENASE SP NAP
 ISOFERULIC-ACID 1-5 SD CRC(FNS)
 ISOLEUCINE 10,000-17,000 PL CCG
 ISOLEUCINE 4,000-12,000 SD CCG
 ISOSCHAFTOSIDE PL HHB
 KILOCALORIES 3,400-5,221 SD CCG PED
 LAMINARASE SD WOI
 LAURIC-ACID SD HHB
 LEAD 1.653 SD HAM33(4):42
 LECITHIN SD HHB
 LEUCINE 20,000-26,000 PL CCG
 LEUCINE 8,000-18,000 SD CCG
 LICHENASE SD WOI
 LIGNOCERIC-ACID SP HHB
 LINOLEIC-ACID PL NAP
 LINOLENIC-ACID PL PAS
 LIPASE SD WOI
 LIPOXIDASE SD WOI
 LUTEIN PL WOI
 LYSINE 15,000-18,000 PL CCG
 LYSINE 2,000-9,000 SD CCG
 LYSOLECITHIN SD HHB
 MAGNESIUM 300-7,000 PL CCG
 MAGNESIUM 530-3,500 SD CCG PED
 MANGANESE 0-105 PL CCG
 MANGANESE 0-86 SD CCG
 MANNOSE SD WOI
 MERCURY 0.079 SD HAM33(4):42
 METHIONINE 1,000-4,000 SD CCG
 6-METHOXY-2(3)1-4(2H)-BENZOXAZOLINONE RT NAP
 8-METHOXYCOUMARIN SD HHB
 MONOGALACTOSYLDIGLYCERIDE SD HHB
 MYRISTIC-ACID SD HHB
 NEOKETOSE SD HHB
 NIACIN 20-73 PL CCG
 NIACIN 15-117 SD CCG
 NICKEL 2.37 SD HAM33(4):42
 NONANAL SH NAP
 NONAN-1-OL SH NAP
 NON-TRANS-2-EN-1-AL SH NAP
 NONA-TRANS-2,CIS-6-DIEN-1-AL SH NAP
 NONA-TRANS-2,CIS-6-DIEN-1-OL SH NAP
 NONA-CIS-3,CIS-6-DIEN-1-OL SH NAP
 NON-CIS-3-EN-1-OL SH NAP
 NUCLEOTIDASE SD WOI
 OCHRATOXIN-A SD NAP
 OCTAN-1-OL SH NAP
 OCT-TRANS-2-EN-1-AL SH NAP
 OLEIC-ACID PL PAS
 ORTHOFERULIC-ACID SD HHB
 OXALACETIC-CARBOXYLASE SD WOI
 OXALIC-ACID 111 FR WBB
 PALMITIC-ACID PL NAP
 PALMITOLEIC-ACID PL NAP
 PANTOTHENIC-ACID 9.7-37 PL CCG
 PANTOTHENIC-ACID 6.8-20 SD CCG
 PECTINS 10,100 SD WOI
 PENTADECA-TRANS-2,CIS-4-DIENAL 2.2 SH NAP
 PENTOSANS 63,000-83,000 SD CCG
 PEPTIDASE SD WOI

PHENOLICS 831-1,662 SD WOI
 PHENYLALANINE 4,000-11,000 PL CCG
 PHENYLALANINE 7,452-8,694 SD WOI
 PHOSPHODIESTERASE SD WOI
 PHOSPHOENOL-PYRUVATE-CARBOXY-
 LASE LF NAP
 PHOSPHOGLUCONIC-DEHYDROGE-
 NASE
 PHOSPHOMONOESTERASE SD WOI
 PHOSPHORUS 400-7,200 PL CCG
 PHOSPHORUS 800-6,800 SD CCG
 PHYLOQUINONE LF NAP
 PHYTASE SD WOI
 PHYTIC-ACID 48,500 SD NAP
 PHYTIC-PHOSPHORUS 2,370-3,760 SD
 WOI
 PHYTOSTERYL-6-O-ACYL-BETA-D-
 GLUCOPYRANOSIDE SD HHB
 POTASSIUM 1,200-43,500 PL CCG
 POTASSIUM 940-7,900 SD CCG PED
 PROLAMINE SD HHB
 PROLINE 173 RT NAP
 PROLINE 17,526-20,447 SD WOI
 PROLINE 12 SH NAP
 PROTEIN 38,000-94,000 PL CCG
 PROTEIN 80,000-380,000 SD CCG PED
 PROTOCATECHUIC-ACID 3-6 SD
 CRC(FNS)
 PROTEINASE SD WOI
 PUROTHIONIN-A SD NAP
 PUTRESCINE SP NAP
 PYRIDINE-NUCLEOTIDE-OXIDASE SD
 WOI
 PYRIDOXINE 2.6-13 SD CCG
 PYROGALLOL-OXIDASE SD WOI
 QUERCETIN PL PAS
 RAFFINOSE 3,300 SD HHB WOI
 RIBOFLAVIN 11-40 PL CCG
 RIBOFLAVIN 0.7-8 SD CCG PED
 RIBONUCLEASE SD WOI
 RIBULOSE-DIPHOSPHATE-CARBOXY-
 LASE LF NAP
 SALICYLIC-ACID 3-4 SD CRC(FNS)
 SCHAFTOSIDE SP NAP
 SERINE 1,000-7,567 SD CCG WOI
 SINAPIC-ACID 14-15 SD CRC(FNS)
 SINAPOYL-8-D-GALACTOSYL-6-C-
 ARABINOSYL-APIGENIN SP NAP
 SINAPOYL-ISOSCHAFTOSIDE PL HHB
 SINAPOYL-VICENIN-1 PL HHB
 SODIUM 200-3,000 PL CCG
 SODIUM 0-2,200 SD CCG
 STACHYOSE SD HHB
 STARCH 542,000-800,000 SD CCG HHB

STEARIC-ACID PL NAP
 SUCCINIC-DEHYDROGENASE SD WOI
 SUCROSE 8,400 SD HHB WOI
 SUGAR 14,000-59,000 SD CCG
 SULFUR 1,300-2,900 PL CCG
 SULFUR 1,200-3,200 SD CCG
 SYRINGIC-ACID 3-5 SD CRC(FNS)
 TETRADECA-2,12-DIEN-4,6,8,10-
 TETRAYN SP HHB
 THIAMIN 3.3-4 PL CCG
 THIAMIN 1.1-12 SD CCG PED
 THREONINE 3,000-6,000 SD CCG
 TOCOPHEROL 59-1,897 SD HHB WOI
 ALPHA-TOCOPHEROL 1,271 SD WOI
 ALPHA-TOCOPHEROL 1,508-2,170 OI
 TOT
 GAMMA-TOCOPHEROL 39-527 OI TOT
 TRICIN PL HHB
 TRIDEC-1,11-DIEN-3,5,7,9-TETRAYN SP
 HHB
 TRIDEC-1-EN-3,5,7,9,11-PENTAYN SP
 HHB
 TRIGONELLINE TR SD NAP
 5,7,4'-TRIHYDROXY-3',5-
 DIMETHOXYFLAVONE SP HHB
 TRIPHOSPHOPYRIDINE-NUCLEOTIDE-
 OXIDASE SD WOI
 ALPHA-TRITICENE LF NAP
 TRITTIOL SP HHB
 ALPHA-TRITISTEROL SP HHB
 BETA-TRITISTEROL SP HHB
 TRYPTOPHAN 1,000-3,000 SD CCG
 TYROSINE 1,000-9,000 SD CCG
 URACIL SD NAP
 URIDINE SD NAP
 VALINE 2,000-9,000 SD CCG
 VANILLIC-ACID 13-39 SD CRC(FNS)
 VICENIN-1 PL HHB
 VIT-E 2,700 SP HHB
 WATER 666,000-876,000 PL CCG
 WATER 60,000-159,000 SD CCG
 XYLOSE
 ZINC 12-19 SD CCG

Pedersen here scored the germ of the seed
 where I have SD PED but the high fiber
 content suggests he may have been dealing
 with more than the germ.

TROPAEOLUM MAJUS L.

“NASTURTIUM”

ASCORBIC-ACID 1,300 FL WOI
 ASCORBIC-ACID 2,000-4,650 LF WOI

ASCORBIC-ACID 1,000-1,600 PE
 WOI
 ASH 14,000-102,200 SH PAN
 BENZYL-CYANIDE SH HHB
 BENZYL-ISOTHIOCYANATE 9,700 SD
 WOI
 BENZYL-ISOTHIOCYANATE 300 SH
 WOI
 CALCIUM 2,110-15,400 SH PAN
 CARBOHYDRATES 92,000-671,500 SH
 PAN
 BETA-CAROTENE 90-665 SH
 PAN
 CHLOROGENIC-ACID PC WOI
 CYANIDIN-SOPHOROCOSIDE PL
 RAA
 11-EICOSENOIC-ACID 11,000-20,000 SD
 HHB WOI
 EO 300 SH HHB
 ERUCIC-ACID 72,000 SD HHB WOI
 FAT 72,000-102,000 SD CRC WOI
 FAT 12,000-87,600 SH PAN
 FIBER 5,000-36,500 SH PAN
 GLUCOTROPAEOLIN PL HHB
 HELENIEN FL HHB
 IRON 13-95 SH PAN
 ISOQUERCITRIN LF HHB
 ISOQUERCITROSIDE LF WOI
 KAEMPFEROL-GLUCOSIDE FL
 WOI
 KILOCALORIES 480-3,500 SH PAN
 LUTEIN FL WOI
 NIACIN 10-75 SH PAN
 OXALIC-ACID SH HHB
 PELARGONIDIN-3-BIOSIDE FL
 HHB
 PELARGONIDIN-3-SOPHOROSIDE FL
 HHB
 PEROXIDASE LF WOI
 PHENYLACETOTHIOHYDROXIMATE
 LF WOI
 PHOSPHORUS 850-6,200 SH PAN
 PHYTOFLUENE FL HHB
 PROTEIN 262,000 SD CRC
 PROTEIN 18,000-131,500 SH
 PAN
 QUERCETIN-3-TRIGLUCOSIDE LF
 WOI
 RIBOFLAVIN 3.5-25.5 SH PAN
 THIAMIN 0.9-6.5 SH PAN
 URIDINE-DIPHOSPHATE-
 GLUCOSE:THIOHYDROXIMATE-
 GLUCOSYL-TRANSFERASE LF WOI

WATER 863,000 SH PAN
 ZEAXANTHIN FL WOI

TROPAEOLUM TUBEROSUM

R. & P.

“ANU”

“MASHUA”

ASCORBIC-ACID 670-4,800 RT CRC PAN
 ASH 4,000-57,000 RT CRC PAN
 CALCIUM 70-500 RT CRC PAN
 CARBOHYDRATES 59,000-786,000 RT
 CRC PAN
 BETA-CAROTENE 0.3-2.1 RT CRC
 FAT 2,000-42,850 RT CRC PAN
 FIBER 6,000-57,000 RT CRC PAN
 IRON 2-85 RT CRC PAN
 NIACIN 6-50 RT CRC PAN
 PHOSPHORUS 220-3,000 RT CRC PAN
 PROTEIN 13,000-115,000 RT CRC
 RIBOFLAVIN 0.8-8.5 RT CRC PAN
 THIAMIN 0.6-9.3 RT CRC PAN
 WATER 860,000-921,000 RT CRC PAN

TSUGA CANADENSIS (L.)

CARRIERE

“EASTERN HEMLOCK”

L-BORNEOL BR HHB
 L-BORNYL-ACETATE BR HHB
 CADINENE BR HHB
 L-CAMPHENE BR HHB
 EO 4,000-4,600 BR HHB
 GALACTOGLUCOMANNAN WD HHB
 GALACTOGLUCOMANNOGLYCAN WD
 HHB
 KAEMPFEROL BR HHB
 L-LIMONENE BR HHB
 MYRCENE 104-120 BR HHB
 ALPHA-PHELLANDRENE BR HHB
 PICEATANNOL 8,000-10,000 BK HHB
 L-ALPHA-PINENE BR HHB
 PINITOL BR HHB
 TANNIN 15,000 LF HHB
 TANNIN 100,000-150,500 BK HHB
 TANNIN 245,000 RT BK HHB
 THUJONE BR HHB

TURNERA DIFFUSA WILLD.

“DAMIANA”

ALBUMINOIDS 150,000 LF HHB
 ALUMINUM 605 LF PED

ARBUTIN 7,000 LF HHB
 ASCORBIC-ACID 983 LF PED
 ASH 90,000 LF PED
 GAMMA-CADINENE LF HHB
 CALAMENENE LF HHB
 CALCIUM 18,100 LF PED
 CARBOHYDRATES 738,000 LF PED
 BETA-CAROTENE 71 LF PED
 CHLOROPHYLL 80,000 LF HHB
 CHROMIUM 31 LF PED
 1,8-CINEOLE 550-1100 LF HHB
 COBALT 129 LF PED
 ALPHA-COPAENE LF HHB
 P-CYMOL 100-200 LF HHB
 DAMIANIN LF AYL
 EO 5,000-10,000 LF AYL
 FAT 45,000 LF PED
 FIBER 109,000 LF PED
 GONZALITOSIN-I BR AYL
 GUM 135,000 BR HHB
 HEXACOSANOL-1 BR AYL
 5-HYDROXY-7,3',4-
 TRIMETHOXYFLAVONE LF 411/
 IRON 880 LF PED
 KILOCALORIES LF PED
 MAGNESIUM 2,040 LF PED
 MANGANESE 54 LF PED
 NIACIN 102 LF PED
 PHOSPHORUS 1,150 LF PED
 ALPHA-PINENE LF HHB
 BETA-PINENE LF HHB
 POTASSIUM 7,760 LF PED
 PROTEIN 127,000 LF PED
 RESIN 65,000 BR HHB
 RIBOFLAVIN TR LF PED
 SELENIUM 6.7 LF PED
 SILICON 41 LF PED
 BETA-SITOSTEROL PL
 SODIUM 58 LF PED
 STARCH 60,000 BR HHB
 TANNINS 35,000 LF HHB
 THIAMIN 1.8 LF PED
 THYMOL LF HHB
 TIN 11 LF PED
 TRIACONTANE PL AYL
 WATER 886,000 LF PED
 ZINC TR LF PED

TUSSILAGO FARFARA L.

“COLTSFOOT”

BETA-AMYRIN LF HHB
 ARABINOSE LF FL CCO

ARNIDENEDIOL PL JSG
 ARNIDIOL FL CCO
 ARSENIC 0.09 FL CAL
 CALCIUM 3,670 FL CAL
 CALENDOL LF HHB
 CHOLINE FL LF CCO
 COPPER 20 FL CAL
 CRYPTOXANTHIN FL HHB
 FARADIOL FL CCO
 FRUCTOSE LF CCO
 L-FUCOSE LF HHB
 GALACTOSE LF FL CCO
 GALLIC-ACID FL CCO
 GLUCOSE LF FL CCO
 N-HEPTACOSAN FL HHB
 HYPERIN FL CCO
 HYPEROSIDE 2,800 FL HHB
 INULIN FL RT HHB
 IRON 370 FL CAL
 ISOQUERCETIN PL 411/
 LAURIC-ACID LF HHB
 LUTEIN FL HHB
 LUTEIN-EPOXIDE FL HHB
 MAGNESIUM 1,080 FL CAL
 MALIC-ACID FL CCO
 MANGANESE 25 FL CAL
 2-O-METHYL-D-XYLOSE LF HHB
 MUCILAGE 69,000 FL WOI
 MUCILAGE 82,000 LF WOI
 MYRISTIC-ACID LF HHB
 PALMITIC-ACID LF HHB
 PARAFFIN RT WOI
 POTASSIUM 18,200 FL CAL
 QUERCETIN LF HHB
 RHAMNOSE LF HHB
 RUTIN 3,600 FL HHB
 SENKIRKINE 75 PL 411/
 SITOSTEROL LF HHB
 SODIUM 130 FL CAL
 STEARIC-ACID FL HHB
 STIGMASTEROL LF HHB
 TANNIN 6,000 FL HHB
 TANNIN 170,000 LF HHB
 TANNIN RH WOI
 TARAXANTHIN FL WOI
 TARAXASTEROL LF HHB
 TARTARIC-ACID FL CCO
 TUSSILAGINE 75 PL 411/
 URONIC-ACID LF FL CCO
 VIOLAXANTHIN FL CCO
 XANTHOPHYLL FL HHB
 XYLOSE LF FL CCO
 ZINC 25 FL CAL

ULLUCUS TUBEROSUS LOZ.

"MELLOCO"

"ULLUCO"

ASCORBIC-ACID 230-1,750 RT CRC PAN
 ASH 6,000-44,000 RT CRC PAN
 CALCIUM 30-365 RT CRC PAN
 CARBOHYDRATES 118,000-912,500 RT
 CRC PAN
 BETA-CAROTENE 0-0.7 RT CRC PAN
 FAT 2,000-14,600 RT CRC PAN
 FIBER 3,000-44,000 RT CRC PAN
 IRON 7-58 RT CRC PAN
 KILOCALORIES 500-3,725 RT CRC PAN
 NIACIN 3-39 RT CRC PAN
 PHOSPHORUS 350-2,775 RT CRC PAN
 PROTEIN 10,000-73,000 RT CRC PAN
 RIBOFLAVIN 0.2-2.2 RT CRC PAN
 THIAMIN 0.4-4.3 RT CRC PAN
 WATER 859,000-863,000 RT CRC PAN

ULMUS RUBRA MUHLENB.

"SLIPPERY ELM"

ALUMINUM 22 BK PED
 ASCORBIC-ACID 0 BK PED
 ASH 76,000 BK PED
 CALCIUM 9,770 BK PED
 CAMPESTEROL WD HHB
 CARBOHYDRATES 819,000 BK PED
 BETA-CAROTENE 24 BK PED
 CHOLESTEROL WD HHB
 CHROMIUM 10 BK PED
 CITROSTADIENOL WD HHB
 COBALT 18 BK PED
 DOLICHOL WD HHB
 FAT 8,000 BK PED
 FIBER 92,000 BK PED
 FRUCTOSE BK HHB
 D-GALACTOSE BK HHB
 GALACTURONIC-ACID BK HHB
 GLUCOSE BK HHB
 HEXOSAN BK HHB
 7-HYDROXYCALAMENAL PL JSG
 7-HYDROXYCALAMENENE PL JSG
 2-HYDROXY-5-ISOPROPYL-6-
 METHOXY-8-METHYL-3-
 NAPHTHALDEHYDE WD
 2-HYDROXY-5-ISOPROPYL-8-METHYL-
 5,6,7,8-TETRAHYDRO-3-NAPTH...
 IRON TR BK PED
 5-ISOPROPYL-3,8-DIMETHYL-2-
 NAPHTHOL WD HHB

KILOCALORIES 2,740 BK PED
 MAGNESIUM 580 BK PED
 MANGANESE 19 BK PED
 MANSONONE-C WD HHB
 METHYL-PENTOSAN BK HHB
 MUCILAGE 200,000-300,000 BK PED
 NIACIN 200 BK PED
 PENTOSANS 120,000-180,000 BK HHB
 PHOSPHORUS 220 BK PED
 POTASSIUM 2,710 BK PED
 PROTEIN 97,000 BK PED
 RIBOFLAVIN 4.1 BK PED
 L-RHAMNOSE BK HHB
 SELENIUM 15 BK PED
 SILICON TR BK PED
 ALPHA-SITOSTEROL PL JSG
 BETA-SITOSTEROL WD HHB
 SODIUM 10 BK PED
 STARCH 80,000-210,000 BK PED
 TANNIN BK PED
 THIAMIN 5 BK PED
 TIN 16 BK PED
 WATER 836,000 BK PED
 ZINC TR BK PED

UMBELLULARIA CALIFORNICA
(HOOK. AND ARN.) NUTT.

"CALIFORNIA BAY"

BENZALDEHYDE 70-280 PL BML CRC
 BETA-BISABOLENE 10-40 PL BML CRC
 1,8-CINEOLE 2,340-9,360 PL BML CRC
 CITRONELLOL 10-40 PL BML CRC
 P-CYMENE 100-400 PL BML CRC
 3,4-DIMETHOXYALLYLBENZENE 2,530
 LF CRC
 ALPH-P-DIMETHYLSTYRENE 70-280 PL
 BML CRC
 BETA-ELEMENE 280-1,120 PL BML CRC
 EO 46,900 EO CRC
 EO 5,600-11,300 ST CRC
 ETHYL-BENZOATE 20-80 PL BML CRC
 ETHYL-CINNAMATE 10-40 PL BML
 CRC
 EUGENOL 10-40 PL BML CRC
 TRANS-BETA-FARNESENE 45-180 PL
 BML CRC
 FORMIC-ACID PL CRC
 GERANIOL 10-40 PL BML CRC
 GUAIA-6,9-DIENE 20-80 PL BML CRC
 ALPHA-HUMULENE 45-180 PL BML
 CRC
 LIMONENE 40-160 PL BML CRC

LINALOOL 200-800 PL BML CRC
 METHYL-EUGENOL 30-120 PL BML
 CRC
 MYRCENE 130-520 PL BML CRC
 ALPHA-PHELLANDRENE 20-80 PL BML
 CRC
 BETA-PHELLANDRENE 10-40 PL BML
 CRC
 ALPHA-PINENE 360-1,440 PL BML CRC
 BETA-PINENE 230-920 PL BML CRC
 PINOCARVONE 10-40 PL BML CRC
 SABINENE 480-1,920 PL BML CRC
 SAFROLE PL CRC
 ALPHA-SANTALENE 10-40 PL BML
 CRC
 SELINA-4,11-DIENE 30-120 PL BML CRC
 ALPHA-SELINENE 10-40 PL BML CRC
 ALPHA-TERPINENE 70-720 PL BML
 CRC
 ALPHA-TERPINEOL 240-960 PL BML
 CRC
 DELTA-TERPINEOL 20-80 PL BML CRC
 TERPINEN-4-OL 280-1,120 PL BML CRC
 TERPINOLENE 40-160 PL BML CRC
 ALPHA-TERPINYL-ACETATE 240-960
 PL BML CRC
 THYMOL 330-1,320 PL BML CRC
 UMBELLULONE 3,900-15,600 PL BML
 CRC
 VERBENONE 10-40 PL BML CRC

ess. oil values calculate assuming 10,000-
 40,000 ppm essential oil (table 2, BML,
 1978)

UNCARIA CATECHU (L. f.)
 WILLD.

“PALE CATECHU; GAMBIR”

7-ACETOXYDIHYDRONOMILIN SD CCO
 ADIPIC-ACID WOI
 ASH 30,000-50,000 WOI
 CATECHINS 300,000-350,000 BR AYL
 (7-33%) WOI
 D-CATECHIN BR AYL
 CATECHOL BR AYL
 CATECHUTANNIC-ACID 240,000 BR
 AYL (22-50%) WOI
 CELLULOSE WOI
 DIHYDROBENZOIC-ACID WOI
 DIHYDROCORYNANTHEIN BR HHB
 DIHYDROGAMBIRTANNINE
 3,14-DIHYDROGAMBIRTANNIN LF ST
 HHB

ELLAGIC-ACID BR AYL
 EPICATECHIN BR HHB
 L-EPICATECHOL LF BR CCO
 GALLIC-ACID BR AYL
 GAMBIRCATECHIN BR HHB
 GAMBIRDINE BR AYL
 GAMBIRFLUORESCEN BY HHB
 GAMBIRIIN-A1 BR CCO
 GAMBIRIIN-A2 BR CCO
 GAMBIRIIN-A3 BR CCO
 GAMBIRIIN-B1 BR CCO
 GAMBIRIIN-B2 BR CCO
 GAMBIRIIN-B3 BR CCO
 GAMBIRIIN-C BR CCO
 GAMBIRINE BY AYL HYPOTENSIVE
 GAMBIRTANNINE BR AYL
 ISOGAMBIRDINE HHB
 11-METHOXYHYOHIMBINE
 BR HHB
 MITRAPHYLLINE HHB
 MUCILAGE BR AYL
 OUROUPARIN BR HHB
 OXOGAMBIRTANNINE BR AYL
 QUERCETIN BY AYL
 STARCH WOI
 SUGAR WOI
 TANNINS BR AYL
 WAX WOI

URGINEA INDICA L.

“INDIAN SQUILL”
 “SEA-ONION”

GLUCOSE TU WOI
 GLYCOSIDES 3,000 TU WOI
 MANNOSE TU WOI
 MUCILAGE 510,000 TU WOI
 PHYTOSTEROL TU HHB
 PROSCILLAREDIN TU WOI
 SCILLARENIN TU JSG
 SCILLARENIN-3-O-ALPHA-L-
 RHAMNOSIDE TU JSG
 SCILLARENIN-3-O-ALPHA-L-
 RHAMNOSIDE-BETA-D-GLUCOSIDE
 TU JSG
 SCILLARENS TU WOI
 SCILLIGLAUCOSIDE TU JSG
 SCILLIGLAUCOSIDE-3-O-BETA-D-
 GLUCOSIDE TU JSG
 SCILLIPHASOSIDIN TU JSG
 SCILLIPHASOSIDIN-3-O-ALPHA-L-
 RHAMNOSIDE TU JSG
 XYLOSE TU WOI

URGINEA MARITIMA L.**"EUROPEAN SQUILL"**

CHELIDONIC-ACID BU HHB
 P-COUMARIC-ACID BU HHB
 CYANIDIN-3-CAFFEYOYL-GLUCOSIDE
 BU HHB
 CYANIDIN-3-GLUCOSIDE BU HHB
 DIHYDROQUERCETIN BU HHB
 DIHYDROQUERCETIN-4'-
 MONOGLUCOSIDE BU HHB
 GALLIC-ACID BU HHB
 GLUCOSCILLIPHAESIDE BU HHB
 GLUCOSCILLAREN-A 500 BU HHB
 GLUCOSINISTRIN BU HHB
 ISORHAMNETIN BU HHB
 KAEMPFEROL-3-GLUCOSIDE BU HHB
 KAEMPFEROL-7-GLUCOSIDE BU HHB
 KAEMPFEROL-7-GLUCOSIDE-3-
 DIGLUCOSIDE BU JSG
 KAEMPFEROL-7-GLUCOSIDE-3-
 RHAMNOGLUCOSIDE BU JSG
 KAEMPFEROL-7-GLUCOSIDE-3-
 TRIGLUCOSIDE BU JSG
 KAEMPFEROL-7-RHAMNOSIDE-3-
 RHAMNOGLUCOSIDE BU JSG
 KAEMPFEROL-3-TRIGLUCOSIDE BU
 HHB
 LEUCOCYANIDIN BU HHB
 PELARGONIDIN-MONOGLUCOSIDE BU
 HHB
 PHYTOSTEROLS BU HHB
 PROSCILLARIDIN-A 500 BU HHB
 QUERCETIN BU HHB
 QUERCETIN-3-MONOGLUCOSIDE BU
 HHB
 QUERCITRIN BU HHB
 SCILLAREN-A 6,000 BU HHB
 SCILLARENIN-A BU HHB
 SCILLARIDIN-A BU HHB
 SCILLARENIN-BETA-D-GLUCOSIDE BU
 HHB
 SCILLAZUROSIDE 100 BU HHB
 SCILLICYANOSIDE 500 BU HHB
 SCILLICOELOSIDE 250 BU HHB
 SCILLIGLAUCOSIDE 700 BU HHB
 SCILLIKRYPTOSIDE BU HHB
 SCILLIN BU HHB
 SCILLIPHAESIDE 400 BU HHB
 SCILLIPICRIN BU HHB
 SCILLIROSIDE BU HHB
 SCILLIROSIDINE BU HHB
 SCILLIRUBROSIDE BU HHB

SCILLIRUBROSIDINE BU HHB
 SCILLITOXIN BU HHB
 SINISTRIN BU WOI
 BETA-SITOSTEROL BU HHB
 STIGMASTEROL BU HHB
 TAXIFOLIN BU HHB

URTICA DIOICA L.**"EUROPEAN NETTLE;
STINGING NETTLE"**

ACETIC-ACID PL HHB
 ACETOPHENONE PL HHB
 ACETYLCHOLINE PL HHB
 ALUMINUM 62-345 LF AAS
 ARSENIC 0.02-0.11 LF AAS
 ASCORBIC-ACID 830 LF PED
 ASH 84,000-163,000 LF PED WOI
 BETAINE LF WOI
 BORON 6-36 LF AAS 1/
 BROMINE 20-110 LF AAS
 BUTYRIC-ACID PL HHB
 CADMIUM 0.01-0.05 LF AAS
 CAFFEIC-ACID PL JLS58:118
 CALCIUM 5,940-33,000 LF AAS
 CARBOHYDRATES 396,000 LF WOI
 BETA-CAROTENE 94-202 LF PED WOI
 CELLULOSE 103,000 LF WOI
 CHLORINE 2,700 LF WOI
 CHLOROPHYLLS 800-10,000 LF HHB
 CHOLINE LF HHB
 CHROMIUM 0.18-1 LF AAS
 (39 LF PED WRONG?)
 COBALT 0.03—0.16 LF AAS
 (132 LF PED WRONG)
 COPPER 2-15 LF AAS
 P-COUMARIC-ACID PL JLS58:118
 FAT 23,000-34,000 LF PED WOI
 FAT 231,000-382,000 SD CRC WOI
 FERULIC-ACID PL JLS58:118
 FLUORINE 1.4-7.8 LF AAS
 FOLACIN PL HHB
 FORMIC-ACID PL HHB
 GLYCEROL 6,975-9,045 SD WOI
 HISTAMINE PL WOI
 5-HYDROXYTRYPTAMINE PL WOI
 IRON 44-418 LF AAS PED WOI
 KOPROPORPHYRIN PL HHB
 LEAD 1.0-6 LF AAS
 LECITHIN PL HHB
 LINOLEIC-ACID 114,235-148,137 SD
 WOI
 LINOLENIC-ACID 2,635-3,417 SD WOI
 LYCOPENE PL HHB

MAGNESIUM 860-8,600 LF AAS PED
 WOI
 MANGANESE 31-172 LF AAS
 MERCURY 0.005-0.028 LF AAS
 2-METHYLHEPTEN-(2)-ON-(6) EO HHB
 MOLYBDENUM <0.1 LF AAS
 MUCILAGE PL HHB
 NIACIN 52 LF PED
 NICKLE 0.5-2.7 LF AAS
 NITROGEN 10,000-55,555 LF AAS
 OLEIC-ACID 17,825-23,115 SD WOI
 PALMITIC-ACID 10,000-13,500 SD WOI
 PANTOTHENIC-ACID 10 LF HHB
 PHOSPHORUS 920-6,800 LF AAS PED
 WOI
 POTASSIUM 6,700-37,220 LF AAS PED
 WOI
 PROTEIN 102,000-304,000 LF PED WOI
 PROTEIN 155,000-201,000 SD CRC
 PROTOPORPHYRIN PL HHB
 RIBOFLAVIN 4-15 LF HHB PED
 RUBIDIUM 3.2-17.8 LF AAS
 SCOPLETIN FL ABS
 SELENIUM < 2 PPB LF AAS
 (22 LF PED WRONG?)
 SEROTONIN 200 PL HHB
 SFA 10,850-14,070 SD WOI
 SILICON 1,170-6,500 LF AAS WOI
 SITOSTEROL FL ABS
 SITOSTEROL-GLUCOSIDE FL ABS
 SODIUM 491,400 LF PED WOI
 SULFUR 1,200-6,665 LF AAS WOI
 THIAMIN 0.8-5.4 LF PED WOI
 TIN 27 LF PED
 ALPHA-TOCOPHEROL 16-94 LF TOT
 VIOLAXANTHIN PL HHB
 WATER 882,000 LF PED
 XANTHOPHYLLEPOXIDE PL HHB
 ZINC 17-95 LF AAS

1/aas=Acta Agric.Scand.Suppl 22. 1980; high
 figure derived by conversion (100/100-
 H₂O=)

VACCINIUM CORYMBOSUM L.

“BLUEBERRY”

ACETIC-ACID 0.7 FR JU NAP
 ACETIC-ACID-HEXYL-ESTER FR JU
 NAP
 AESCULETIN PL PAS
 ALANINE 280-1,820 FR USA
 ARGININE 340-2,210 FR USA
 ASCORBIC-ACID 125-878 FR USA

ASH 2,070-13,845 FR USA
 ASPARTIC-ACID 520-3,379 FR USA
 BENZALDEHYDE FR JU NAP
 BENZYL-ALCOHOL 0.01-0.08 FR JU
 NAP
 BORON 0.1-13 FR BOB
 BUTANOIC-ACID 0.01 FR JU NAP
 BUTAN-1-OL 0.016 FR JU NAP
 BUTAN-2-OL 0.013 FR JU NAP
 BUTYRIC-ACID-HEX-TRANS-2-ENYL-
 ESTER FR JU NAP
 CAFFEIC-ACID PL PAS
 CAFFEIC-ACID-4-O-BETA-D-GLU-
 COSIDE FR NAP
 CALCIUM 58-400 FR USA
 CAPROIC-ACID 0.05 FR JU NAP
 CARBOHYDRATES 141,300-918,130 FR
 USA
 ALPHA-CAROTENE FR NAP
 BETA-CAROTENE 0.6-3.9 FR USA
 CARYOPHYLLENE FR NAP
 (+)-CATECHIN PL PAS
 ALPHA-CEDRENE PL PAS
 CHLOROGENIC-ACID 3,000 FR NAP
 CHRYSANTHEMIN LF NAP
 1,8-CINEOLE FR NAP
 TRANS-CINNAMYL-ALCOHOL 0.01 FR
 NAP
 TRANS-CINNAMALDEHYDE FR NAP
 CITRONELLOL 0.01-0.03 FR NAP
 COPPER 0.5-4 FR USA
 P-COUMARIC-ACID PL PAS
 P-COUMARIC-ACID-O-BETA-D-
 GLUCOSIDE FR NAP
 P-CRESOL PL PAS
 BETA-CRYPTOXANTHIN FR NAP
 CYANIDIN FR NAP
 CYANIDIN-3-O-ALPHA-L-ARABINOSIDE
 FR NAP
 CYANIDIN-3-O-ALPHA-L-GALACTO-
 SIDE FR NAP
 CYANIN FR NAP
 CYSTINE 70-455 FR USA
 GAMMA-DECALACTONE PL PAS
 DELPHINIDIN FR NAP
 DELPHINIDIN-3-O-ALPHA-L-ARABINO-
 SIDE FR NAP
 DELPHINIDIN-3-O-ALPHA-L-GALACTO-
 SIDE FR NAP
 DELPHINIDIN-3-O-BETA-D-GLUCOSIDE
 FR NAP
 DELPHININ FR NAP
 P-DIMETHYL-ALPHA-STYRENE FR NAP
 ELLAGIC-ACID PL PAS

- EUGENOL 0.02 FR NAP
 FARNESOL 0.04 FR NAP
 FARNESOL-ACETATE 0.01-0.07 FR NAP
 FAT 3,740-25,090 FR USA
 FERULIC-ACID PL PAS
 FERULIC-ACID-O-BETA-D-GLUCOSIDE FR NAP
 FIBER 12,770-86,000 FR USA
 FOLACIN 0.05-0.5 FR USA
 FRUCTOSE FR NAP
 GALLIC-ACID PL PAS
 GALLIC-ACID-4-O-BETA-D-GLUCOSIDE FR NAP
 GERANIOL 0.01-0.03 FR NAP
 GLUCOSE FR NAP
 GLUTAMIC-ACID 830-5,393 FR USA
 GLYCINE 280-1,819 FR USA
 HEXAN-1-AL FR JU NAP
 HEXAN-1-OL 0.04-0.4 FR JU NAP
 HEX-CIS-3-EN-1-AL 0.01-0.06 FR JU NAP
 HEX-TRANS-2-1-AL 0.02-0.5 FR JU NAP
 HEX-TRANS-2-1-OL 0.08 FR JU NAP
 HEX-TRANS-2-EN-1-OL 0.02-0.5 FR JU NAP
 HISTIDINE 100-715 FR USA
 P-HYDROXYBENZOIC-ACID PL PAS
 4-HYDROXYCINNAMIC-ACID PL PAS
 HYDROXY-CITRONELLOL 0.02-0.07 FR NAP
 HYDROXY-ISOCARVOMENTHOL FR NAP
 HYPEROSIDE PL PAS
 BETA-IONONE PL PAS
 IRON 2-11 FR USA
 ISOEUGENOL FR NAP
 ISOLEUCINE 210-1,365 FR USA
 ISOQUERCITRIN LF NAP
 ISOVALERIC-ACID-ETHYL-ESTER PL PAS
 KILOCALORIES 560-3,638 FR USA
 LEUCINE 400-2,600 FR USA
 LIMONENE FR NAP
 LINALOOL 0.01-0.05 FR NAP
 LYSINE 120-780 FR USA
 MAGNESIUM 48-332 FR USA
 MALVIDIN FR NAP
 MALVIDIN-3-O-ALPHA-L-ARABINOSIDE FR NAP
 MALVADIN-3-O-ALPHA-L-GALACTOSIDE FR NAP
 MALVIDIN-3-O-BETA-D-GLUCOSIDE FR NAP
 MALVIN FR NAP
 MANGANESE 3-20 FR USA
 METHIONINE 110-715 FR USA
 2-METHOXY-5-VINYL-PHENOL FR NAP
 2-METHYL-BUTANOIC-ACID 0.05 FR JU NAP
 MYRCENE FR NAP
 MYRICETIN PL PAS
 MYRICETIN-3-O-BETA-D-GLUCOSIDE FR NAP
 MYRISTICIN FR NAP
 NEOMYRTILLIN LF NAP
 NEROL 0.02-0.08 FR NAP
 NIACIN 3.4-24 FR USA
 NONAN-1-OL FR JU NAP
 OCTAN-1-OL FR JU NAP
 OLEANOLIC-ACID PL PAS
 ORIENTIN PL PAS
 PANTOTHENIC-ACID 0.9-6 FR USA
 PENTAN-1-OIC-ACID FR JU NAP
 PENTAN-1-OL 0.02 FR JU NAP
 PENT-1-EN-3-OL FR JU NAP
 PENTYL-FURAN FR NAP
 PEONIDIN FR NAP
 PEONIDIN-3-O-ALPHA-L-ARABINOSIDE FR NAP
 PEONIDIN-3-O-ALPHA-L-GALACTOSIDE FR NAP
 PEONIDIN-3-O-BETA-D-GLUCOSIDE FR NAP
 PETUNIDIN FR NAP
 PETUNIDIN-3-O-ALPHA-L-ARABINOSIDE FR NAP
 PETUNIDIN-3-O-ALPHA-L-GALACTOSIDE FR NAP
 PETUNIDIN-3-O-BETA-D-GLUCOSIDE FR NAP
 PHENOL 0.01-0.06 FR NAP
 PHENYLALANINE 240-1,560 FR USA
 2-PHENYLETHANOL 0.02-0.3 FR NAP
 3-PHENYL-PROPAN-1-OL FR NAP
 PHLOROGLUCINOL PL PAS
 PHOSPHORUS 96-675 FR USA
 PHYLLOQUINONE 300 FR NAP
 ALPHA-PINENE FR NAP
 PIPERONAL PL PAS
 POTASSIUM 879-5,859 FR USA
 PROANTHOCYANIN FR NAP
 PROLINE 250-1,624 FR USA
 PROTEIN 6,520-44,720 FR USA
 PROTOCATECHUIC-ACID-4-O-BETA-D-GLUCOSIDE FR NAP
 PULEGONE PL PAS
 QUERCETIN PL PAS
 QUERCETIN-3-O-BETA-D-GLUCOSIDE PL PAS

QUERCITRIN PL PAS
 RIBOFLAVIN 0.5-3.4 FR USA
 ROSMARINIC-ACID PL PAS
 RUTIN PL PAS
 SCOPOLETIN PL PAS
 SERINE 200-1,300 FR USA
 BETA-SITOSTEROL PL PAS
 SODIUM 56-414 FR USA
 ALPHA-TERPINEOL 0.01-0.03 FR NAP
 THIAMIN 0.5-3.1 FR USA
 THREONINE 180-1,170 FR USA
 THYMOL FR NAP
 ALPHA-TOCOPHEROL 18-116 FR TOT
 TRYPTOPHAN 30-195 FR USA
 TYROSINE 80-520 FR USA
 URSOLIC-ACID PL PAS
 VALINE 280-1,820 FR USA
 VANILLIC-ACID PL PAS
 VANILLIN 0.01-0.05 FR NAP
 4-VINYLPHENOL 0.07 FR JU NAP
 VIT-B6 0.3-2.5 FR USA
 WATER 843,000-849,000 FR USA
 ZINC 1-7 FR USA

VACCINIUM MACROCARPON
 AITON

“CRANBERRY”

ALUMINUM 2-15 FR AAS
 ANISALDEHYDE FR HUL
 ANTHOCYANOSIDES FR
 ASCORBIC-ACID 75-1,003 FR CRC USA
 ASH 1,800-17,000 FR AAS USA
 BENZALDEHYDE FR HUL
 BENZOIC-ACID FR HAD
 BENZYL-ALCOHOL FR HUL
 BENZYL-BENZOATE FR JAD
 BORON 1-8 FR AAS
 CADMIUM 0.03-0.23 FR AAS
 CALCIUM 70-1,157 FR CRC USA
 CARBOHYDRATES 108,000-942,050 FR
 CRC USA
 BETA-CAROTENE 0.2-2.6 FR USA
 CATECHINS FR ABS
 CHLOROGENIC-ACID FR ABS
 CHROMIUM 0.01-0.08 FR AAS
 COBALT <0.005 FR AAS
 COPPER 0.5-4.7 FR USA
 CYANIDIN-3-ARABINOSIDE FR
 JFS54:383
 CYANIDIN-3-GALACTOSIDE FR
 JFS54:383
 CYANIDIN-3-GLUCOSIDE FR JFS54:383
 EUGENOL FR HUL

FAT 2,000-58,000 FR CRC USA
 FIBER 12,000-116,000 FR CRC USA
 FOLACIN 0.1-0.2 FR USA
 IRON 2-41 FR CRC USA
 KILOCALORIES 490-3,800 FR CRC USA
 LEAD 0.2-2 FR AAS
 LUTEIN 0.28-2 FR JAF37:657
 MAGNESIUM 50-690 FR AAS USA
 MALIC-ACID FR JAD
 MANGANESE 1.4-200 FR AAS USA
 MERCURY 0.001-0.007 FR AAS
 2-METHYL-BUTYRIC-ACID FR JAD
 MOLYBDENUM 0.1-0.7 FR AAS
 NIACIN 1-8.3 FR CRC USA
 NICKEL 0.05-0.38 FR AAS
 NITROGEN 650-5,000 FR AAS
 OXALIC-ACID FR JAD
 OXYCOCCRIYANINE FR JAD
 PANTOTHENIC-ACID 2.2-16 FR USA
 PEONIDIN-3-ARABINOSIDE FR
 JFS54:383
 PEONIDIN-3-GALACTOSIDE FR
 JFS54:383
 PEONIDIN-3-GLUCOSIDE FR JFS54:383
 PHOSPHORUS 90-1,075 FR AAS CRC
 USA
 POTASSIUM 250-6,777 FR AAS CRC
 USA
 PROTEIN 3,900-33,000 FR CRC USA
 QUERCETIN 100-250 FR ABS HAD
 QUINIC-ACID FR CRC(FNS)
 RIBOFLAVIN 0.2-1.7 FR CRC USA
 RUBIDIUM 0.5-3.5 FR AAS
 SELENIUM <0.002 FR AAS
 SODIUM 10-165 FR CRC USA
 SULFUR 65-500 FR AAS
 ALPHA-TERPINEOL FR JAD
 THIAMIN 0.3-2.5 FR CRC USA
 ALPHA-TOCOPHEROL 9-81 FR TOT
 VIT-B6 0.6-5.4 FR USA
 WATER 865,400-879,000 FR CRC USA
 ZINC 1-19 FR AAS USA

AAS=ACTA AGRIC SCAND SUPPL
 22:1980 H20= 87%; ZMB = 7.69 X APB

VACCINIUM MYRTILLUS L.

“BILBERRY”

“WHORTLEBERRY”

ALUMINUM 4-38 (-318) FR AAS (PED) 1/
 BETA-AMYRIN LF HHB
 ANTHOCYANOSIDES 3,000-20,000 LF
 411/ 442/

- ARBUTIN LF 413/
 ARBUTIN 0 FR 411/
 ARSENIC <0.01 FR AAS
 ASCORBIC-ACID 96-1,650 FR HHB PED
 ASH 2,500-20,000 (-48,000) FR AAS (PED)
 ASPERULOSIDE LF HHB
 ASTRAGALIN LF FR HHB
 BENZOIC-ACID LF HHB
 BORON 0.6-10 FR AAS
 BROMINE <1 FR AAS
 CADMIUM 0.001-0.02 FR AAS
 CAFFEIC-ACID LF HHB
 CALCIUM 170-1,540 (-6,380) FR AAS
 (PED)
 BETA-CAROTENE 0.47-47 FR PED
 JAF37:657
 CARYOPHYLLENE LF HHB
 CATECHIN LF HHB
 CERYL-ALCOHOL LF HHB
 CHLOROGENIC-ACID LF HHB
 CHROMIUM 0.01-0.08 FR AAS
 CITRIC-ACID LF HHB
 COBALT <0.005 FR AAS
 COPPER 0.7-6.3 FR AAS
 M-COUMARIC-ACID FR 444/
 O-COUMARIC-ACID FR 444/
 CYANIDIN FR HHB
 CYANADIN-3-O-ARABINOSIDE 219-438
 LF 439/
 CYANIDIN-3-O-GALACTOSIDE 275-550
 LF 439/
 CYANIDIN-3-O-GLUCOSIDE 342-684 LF
 439/
 DELPHINIDIN FR HHB
 DELPHINIDIN-3-O-ARABINOSIDE
 432-864 LF 439/
 DELPHINIDIN-3-O-GALACTOSIDE
 504-1,004 LF 439/
 DELPHINIDIN-3-O-GLUCOSIDE
 581-1,162 LF 439/
 DELPHINIDIN-3-MONOGLUCOSIDE FR
 HHB
 DELPHINIDIN-5-MONOGLYCOSIDE FR
 HHB
 DELPHINIDIN-3-RHAMNOGLYCOSIDE
 FR HHB
 DIHYDROXYCINNAMIC-ACID FR HHB
 (ANTIHISTAMINIC HHB)
 EPICATECHIN LF HHB
 EPIGALLOCATECHIN LF HHB
 EPIMYRTINE PL JSG
 FAT 310,000 SD HHB
 FERULIC-ACID FR ABS
 FLUORINE <0.1 FR AAS
 GALLIC-ACID LF HHB
 GALLOCATECHIN LF HHB
 HYDROQUINONE LF 413/
 M-HYDROXYBENZOIC-ACID FR 444/
 P-HYDROXYBENZOIC-ACID FR 444/
 HYPEROSIDE LF FR HHB
 INOSITOL FR HHB
 INVERT-SUGARS 300,000 FR HHB
 IRON 4-56 (-1,510) FR AAS PED
 IRON 250 LF HHB
 ISOQUERCITRIN LF 444/
 LEAD 0.04-0.7 FR AAS
 LUTEIN 2.6-26 FR JAF37:657
 MAGNESIUM 79-700 FR AAS
 MALIC-ACID LF HHB
 MALVIDIN FR HHB
 MALVIDIN-3-O-ARABINOSIDE 81-162
 LF 439/
 MALVIDIN-3-O-GALACTOSIDE 127-254
 LF 439/
 MALVIDIN-3-O-GLUCOSIDE 335-370 LF
 439/
 MANGANESE 23-370 FR AAS
 MANGANESE 2,500 LF HHB
 MERCURY <0.001 FR AAS
 MOLYBDENUM <0.1 FR AAS
 MONOTROPEIN LF FR HHB
 MYRTILLIN FR HHB
 MYRTILLOL LF HHB
 MYRTINE PL HHB
 NEOMYRTILLIN LF HHB
 NIACIN 65 FR PED
 NONACOSANE LF HHB
 OLEANOLIC-ACID LF HHB
 OXALIC-ACID LF HHB
 PARACOUMARIC-ACID FR 444/
 PECTIN FR HHB
 PEONIDIN LF 442/
 PEONIDIN-3-O-ARABINOSIDE 22-44 LF
 439/
 PEONIDIN-3-O-GALACTOSIDE 34-68 LF
 439/
 PEONIDIN-3-O-GLUCOSIDE 131-262 LF
 439/
 PETUNIDIN FR HHB
 PETUNIDIN-3-O-ARABINOSIDE 108-216
 LF 439/
 PETUNIDIN-3-O-GALACTOSIDE 189-378
 LF 439/
 PETUNIDIN-3-O-GLUCOSIDE 367-734 LF
 439/
 PHOSPHORUS 170-1,385 FR AAS
 POTASSIUM 1,000-8,460 FR AAS
 PROTEIN 129,000 FR PED

PROTOCATECHUIC-ACID FR 444/
 QUERCETIN LF HHB
 QUERCETIN-3-ARABINOSIDE LF HHB
 QUERCETIN-3-GALACTOSIDE LF 444/
 QUERCETIN-3-GLUCOSIDE LF HHB
 QUERCETIN-3-GLUCOSIDOGALACTOSIDE
 LF HHB
 QUERCETIN-3-RHAMNOSIDE LF HHB
 QUERCITRIN LF 444/
 QUINIC-ACID 20,000-50,000 LF HHB
 RESINIC-ACID LF HHB
 RIBOFLAVIN 2-3 FR PED
 RUBIDIUM 5-60 FR AAS
 SELENIUM <0.002 FR AAS
 SILICON 5-38 FR AAS
 SODIUM 50 FR PED
 SUCCINIC-ACID LF HHB
 SULFUR 130-1,075 FR AAS
 SYRINGIC-ACID FR 444/
 TANNIN 50,000-120,000 FR HHB
 TANNIN 60,000-200,000 LF HHB
 THIAMIN 7-8 FR PED 1/
 URSOLIC-ACID 2,500 FR HHB
 URSOLIC-ACID LF HHB
 VANILLIC-ACID FR 444/
 WATER 870,000-932,000 FR AAS PED
 ZINC 1.4-40 (-87) FR AAS PED

AAS=ACTA AGRIC SCAND SUPPL
 22:1980 H2O=87%; ZMB = 7.69 X APB

VACCINIUM VITIS-IDDAEA L.

var. *MINUS* LODD.

“COWBERRY”

“LINGEN”

“LINGONBERRY”

ALUMINUM 5-53 FR AAS
 1-AMINOCYCLOPROPAN-1-CARBONIC-
 ACID FR HHB-
 ARBUTIN 40,000-90,000 LF HHB/
 ARSENIC <0.01 FR AAS
 ASCORBIC-ACID 280-1,865 FR AAS
 HHB
 ASH 2,500-18,000 FR AAS
 AVICULARIN LF HHB
 BENZOIC-ACID 1,360 FR HHB
 BORON 1.4-11 FR AAS
 BROMINE <1 FR AAS
 CADMIUM 0.001-0.07 FR AAS
 CAFFEIC-ACID LF HHB
 2-O-CAFFELOYL-ARBUTIN LF HHB
 CALCIUM 180-1,730 FR AAS
 BETA-CAROTENE

(+)-CATECHIN 3,500 FR HHB
 CATECHIN-TANNINS 80,000 LF HHB
 CHROMIUM 0.01-0.13 FR AAS
 CITRIC-ACID FR HHB
 COBALT <0.005 FR AAS
 COPPER 0.7-5.2 FR AAS
 CYANIDIN-3-GALACTOSIDE FR HHB
 (-)-EPICATECHIN LF HHB
 FLUORINE 0.1-0.7 FR AAS
 FRUCTOSE 50,000 FR HHB
 GALLIC-ACID LF HHB
 GALLOCATECHIN LF HHB
 GLUCOSE 40,000 FR HHB
 HYDROQUINONE LF HHB
 BETA-HYDROXY-KETO-BUTYRIC-ACID
 FR HHB
 4-HYDROXY-PHENYL-BETA-
 GENTIOBIOSIDE LF HHB
 5-HYDROXY-PIPECOLIC-ACID FR HHB
 HYPEROSIDE LF FR HHB
 IRON 4-31 FR AAS
 IRON 250 LF HHB
 ISOQUERCITRIN LF HHB
 KAEMPFEROL FR HHB
 KETOGLUTARIC-ACID FR HHB
 LEAD 0.05-0.4 FR AAS
 LYCOPENE FR HHB
 MAGNESIUM 80-600 FR AAS
 MALIC-ACID FR HHB
 MANGANESE 28-250 FR AAS
 MANGANESE 2,500 LF HHB
 MERCURY 0.0003-0.07 FR AAS
 MOLYBDENUM <0.1 FR AAS
 N-NONACOSANE FR HHB
 PECTIN 4,000 FR HHB
 PHOSPHORUS 150-1,130 FR AAS
 POTASSIUM 720-6,200 FR AAS
 PYROSIDE LF HHB
 QUERCETIN LF HHB
 QUINIC-ACID FR HHB
 RUBIDIUM 2.7-22 FR AAS
 SALIDROSIDE LF HHB
 SALICYLIC-ACID FR HHB
 SELENIUM 0-0.013 FR AAS
 SILICON 5-133 FR AAS
 SUCROSE 5,300 FR HHB
 SUGAR 80,000 FR HHB
 SULFUR 130-1,075 FR AAS
 TANNIN 60,000-200,000 LF HHB
 URSOLIC-ACID 7,500 FR HHB
 VACCINIIN 410 FR HHB
 WATER 800,000-932,000 FR AAS HHB
 ZEAXANTHIN FR HHB
 ZINC 1.7-14 FR AAS

AAS=ACTA AGRIC SCAND SUPPL
22:1980 H2O=85%; ZMB = 6.67 X APB

VALERIANA OFFICINALIS L.

“VALERIAN”

ACETIC-ACID RT
ACETOXY-VALEPOTRIATUM
2-ACETYL-PYRROLE PL JSG
ACEVALTRATE 25-400 RT
(S)-(-)-ACTINIDINE RT
N-(BETA-(P-HYDROXYPHENYL)-
ETHYL)-ACTINIDINE
ALLOAROMADENDRENE RT
ALUMINUM 422 RT PED
ASCORBIC-ACID 0 RT PED
ASH 143,000 RT PED
AZULENE RT
BALDRIANIC-ACID RT
BALDRIATANNIC-ACID RT
BETA-BISABOLENE RT
BORNEOL RT
BORNYL-ACETATE RT
BORNYL-BUTYRATE RT
BORNYL-FORMATE RT
BORNYL-ISOVALERIANATE RT
DELTA-CADINENE RT
CAFFEIC-ACID PL JSL58:161
CALCIUM 42,000 RT PED
CAMPHENE RT
CAPRONIC-ACID (20.4%)
CARBOHYDRATES 750,000 RT PED
BETA-CAROTENE TR PED
CARYOPHYLLENE RT
CATALASE
CHATINENE RT 411/
CHLOROGENIC-ACID RT
CHOLINE RT 411/
CHROMIUM 18 RT PED
COBALT 48 RT PED
P-COUMARIC-ACID PL JSL58:161
ALPHA-CURCUMENE
P-CYMOL RT
DEACETYLISOLAVTRATE RT 411/
DIDROVALTRATE 50-1,000 RT
DIHYDROVALEPOTRIATUM
BETA-ELEMENE RT
EO 5,000-20,000 RT
7-EPIDEACETYLISOVALTRATE
8-EPIKESSANOL PL JSG
EREMOPHILENE
EUGENYL-ISOVALERATE RT 411/
FAT 23,000 RT PED
FAURINOL RT 411/

FAURINONE RT 411/
ALPHA-FENCHENE RT
FIBER 79,000 RT PED
FORMIC-ACID RT
FRUCTOSE 9,000 RT
GLUCOSE 15,000 RT
GUM RT
HOMODIVALTRATE RT 411/
HOMOVALTRATE RT 411/
HYDROXYVALERINIC-ACID RT 411/
BETA-IONONE RT
IRON 480 RT PED
ISOEUGENYL-ISOVALERATE RT 411/
ISOVALERIANIC-ACID (20%) RT
ISOVALERIC-ACID RT
ISOVALEROXY-HYDROXY-
DIDROVALTRATE 25-1,000 RT
KAEMPFEROL PL JSL58:161
KANOKOSIDES PL JSG
ALPHA-KERZYLALCOHOL RT
KESSANE PL JSG
KESSENE PL JSG
ALPHA-KESSYL-ALCOHOL PL JSG
KESSYL-GLYCOL PL JSG
KONGOL PL JSG
LEDOL RT
LIMONENE RT
LINOLEIC-ACID (16.5%)
GAMMA-LINOLENIC-ACID (6.2%)
MAALIOL RT
(+)-MAALIOXIDE PL JSG
MAGNESIUM 3,180 RT PED
MANGANESE 56 RT PED
ALPHA-METHYL-2-PYRROLYL-KETONE
MYRCENE
MYRTENOL
MYRTENYL-ACETATE RT
MYRTENYL-ISOVALERIANATE RT
NIACIN 52 RT PED
OLEIC-ACID (0.3%)
OXYDASE
PALMITIC-ACID (8.3%)
PATCHOLYL-ALCOHOL RT
PEROXIDASE
BETA-PHELLANDRENE RT
PHOSPHORUS 330 RT PED 1/
BETA-PINENE RT
POTASSIUM 10,300 RT PED
PROTEIN 86,000 RT PED
QUERCETIN PL JSL58:161
RAFFINOSE 30,000 RT
RESIN RT
RIBOFLAVIN 1.2 RT PED
SACCHAROSE 50,000

SELENIUM 44 RT PED
 SILICON 9 RT PED
 BETA-SITOSTEROL RT
 BETA-SITOSTEROL-STEARATE RT
 SODIUM 230 RT PED
 GAMMA-TERPINENE RT
 TERPINOLENE RT
 THIAMIN 1.6 RT PED
 TIN 28 RT PED
 TRIDECEN-(1)-PENTAIN(3,5,7,9,11) RT
 VALECHLORINE RT 411/
 ALPHA-VALENE RT
 BETA-VALENE RT
 GAMMA-VALENE RT
 VALENOL RT
 VALEPOTRIATES 5,000-20,000 RT
 VALEPOTRIATUM
 VALERENAL PL JSG
 VALERENIC-ACID RT 411/
 VALERENOL PL JSG
 VALERENOLIC-ACID PL JSG
 VALERENONE RT JSG
 VALERIANINE RT 411/
 VALERIANOL RT
 VALERIANOLIC-ACID RT
 VALERIANONE RT
 VALERIC-ACID RT
 VALERINE RT 411/
 VALEROSIDATUM RT JSG
 VALEROSIDE-A 440 RT
 VALTRATE 4,000-18,000 RT
 VALTRATE-ISOVALEROXYHYDRIN RT
 WATER 823,000 RT PED
 ZINC TR RT PED

Pedersen reports some strange compounds,
 like trigonelline, stachydrine, et al that are
 not cited elsewhere. I elected not to enter
 them..

VALERIANELLA LOCUSTA (L.) LATERRADE

“CORN SALAD”

“LAMB’S LETTUCE”

ALANINE 880-12,220 PL USA
 ARGININE 910-12,640 PL USA
 ASH 12,000-166,666 PL USA
 ASPARTIC-ACID 1,760-24,440 PL USA
 BORON 275-350 PL BOB
 CARBOHYDRATES 36,000-500,000 PL
 USA
 CYSTINE 200-2,775 PL USA
 FAT 4,000-55,555 PL USA

FIBER 8,000-111,111 PL USA
 GLUTAMIC-ACID 2,030-28,195 PL USA
 GLYCINE 790-10,970 LF USA
 HISTIDINE 360-5,000 PL USA
 ISOLEUCINE 990-13,750 PL USA
 KILOCALORIES 210-2,915 PL USA
 LEUCINE 1,330-18,470 PL USA
 LYSINE 1,010-14,025 PL USA
 METHIONINE 250-3,470 PL USA
 PHENYLALANINE 910-12,640 PL USA
 PROLINE 780-10,830 PL USA
 PROTEIN 20,000-277,775 PL USA
 SERINE 630-8,750 PL USA
 THREONINE 750-10,415 PL USA
 TRYPTOPHAN 260-3,610 PL USA
 TYROSINE 360-5,000 PL USA
 VALINE 990-13,750 PL USA
 WATER 928,000 PL USA

VANILLA PLANIFOLIA ANDR.

“VANILLA”

ACETALDEHYDE FR AYL
 ACETIC-ACID FR AYL
 ACETOPHENONE FR HHB
 ANISALDEHYDE FR HHB
 ANISIC-ACID FR HHB
 ANISIC-ALCOHOL FR HHB
 ANISYLACETATE FR HHB
 ANISYL-ETHYL-ETHER FR AYL
 ASH 45,000-97,000 FR WOI
 BENZALDEHYDE FR HHB
 BENZOIC-ACID FR HHB
 BENZYL-ALCOHOL FR HHB
 CALCIUM 19,000 FR CRC
 CALCIUM-OXALATE PL WOI
 CAPRINIC-ACID-ESTER FR HHB
 CAPROIC-ACID FR WOI
 N-CAPRYLIC-ACIDESTER FR HHB
 CARBOHYDRATE 305,000-628,000 FR
 CRC WOI
 CATECHIN FR WOI (ANTICARIES)
 CINNAMIC-ACID-ETHYL-ESTER
 CINNAMIC-ALCOHOL FR HHB?
 CITRIC-ACID FR HHB
 CREOSOL FR BML
 P-CRESOL FR HHB
 P-CRESOL-METHYL-ETHER FR HB
 DIACETYL FR HHB
 EO 6,000 FR WOI
 ETHYL-PALMITATE FR BML
 EUGENOL FR AYL
 FAT 47,000-212,000 FR CRC WOI
 FIBER 153,000-263,000 FR CRC WOI

FRUCTOSE 7,500 FR HHB 1/
 FURFURAL FR AYL
 FURFUROL FR HHB
 GLUCOSE 7,500 FR HHB
 GLUCOVANILLIC-ACID FR WOI
 GLUCOVANILLIN FR WOI
 GUAIACOL FR HHB
 HEPTANOIC-ACID FR BML
 P-HYDROXYBENZYL-ALCOHOL FR
 HHB
 P-HYDROXYBENZALDEHYDE FR AYL
 P-HYDROXYBENZYL-METHYL-ETHER
 FR AYL
 ISOBUTYRIC-ACID FR AYL
 MALIC-ACID FR HHB
 METHYL-ANISATE FR BML
 CIS-METHYL-CINNAMATE FR BML
 TRANS-METHYL-CINNAMATE FR BML
 METHYL-PALMITATE FR BML
 NAPHTHALENE FR HHB?
 GAMMA-NONALACTONE FR BML
 NONANOIC-ACID FR BML
 OCTANOIC-ACID FR BML
 1-OCTEN-3-OL FR BML
 OXALIC-ACID FR HHB
 PHOSPHORUS 700 FR CRC
 PIPERONAL
 PROTEIN 26,000-100,000 FR CRC WOI
 PROTOCATECHUIC-ACID FR HHB
 PROTOCATECHUALDEHYDE FR HHB
 RESIN FR WOI
 SUCROSE 350,000 FR HHB
 SUGARS 71,000-350,000 FR HHB WOI
 TANNIN FR WOI
 VANILLIC-ACID FR HHB
 VANILLIN 13,000-30,000 FR AYL WOI
 VANILLIN-BETA-GLUCOSIDE FR HHB
 VANILLYL-ALCOHOL FR HHB
 VANILLYL-ETHYL-ETHER FR AYL
 WATER 259,000-309,000 FR WOI

***VANILLA TAHITENSIS* J.W.
 MOORE**

"TAHITI VANILLA"

ANISALDEHYDE FR BML
 ANISYL-ALCOHOL FR BML
 ANISYL-ETHYL-ETHER FR BML
 P-CRESOL FR BML
 TRANS-METHYL-CINNAMATE FR
 BML
 VANILLIN FR BML
 VANILLYL-ETHYL-ETHER FR BML

***VERATRUM ALBUM* L.**

"WHITE HELLEBORE"

ACETIC-ACID RH HHB
 ALKALOIDS 13,000 PL HHB
 ALKALOIDS 10,000 RH HHB
 ALKAMINE-A RH HHB
 ALKAMINE-X RH HHB
 ANGELOYL-ZYGADENILIC-ACID-
 LACTONE RH HHB
 ANGELOYL-ZYGADENINE PL JSG
 CERALOBINE PL ALK
 CHELIDONIC-ACID RH HHB
 DEACETYLGEMITETRINE PL ALK
 DEACETYLNEOPROTOVERATRINE PL
 ALK
 DEACETYLPROTOVERATRINE PL ALK
 11-DEOXOJERVINE RH HHB
 FRUCTOSE RT
 GERALBINE RT ALK
 GERMERINE RH ALK
 GERMINE PL JSG
 GERMITETRINE RH ALK
 GLUCOSE RH HHB
 GLUCOVERACINTINE PL JSG
 ISOGERMINE PL JSG
 ISORUBIJERVINE RT ALK
 JERVINE RT ALK
 PSI-JERVINE
 LOVERAINE RH HHB
 20-(2-METHYL-1-PYRROLIN-5-OYL)-4-
 PREGNEN-3-ONE PL JSG
 PROTOVERATRIDINE PL ALK
 PROTOVERATRINE-A PL ALK
 PROTOVERATRINE-B PL ALK
 PSEUDOJERVINE RT ALK
 PSEUDOJERVOINE RH HHB
 RESIN 250,000 RH HHB
 RHAMNOVERACINTINE PL JSG
 RUBIJERVINE RT ALK
 RUBIVERINE RH HHB
 SYNAIN RH HHB
 BETA-SITOSTEROL RH HHB
 SOLANIDINE PL ALK
 SUCROSE RH HHB
 VERACINE RH HHB
 VERACINTINE PL JSG
 VERADIOL RH HHB
 VERALBIDINE RH HHB
 VERALININE RT ALK
 VERALKALINE RT ALK
 VERALOBINE PL ALK
 VERALOSIDINE PL HHB

VERALOSINE PL HHB
 VERALOSININE PL HHB
 VERAMARINE PL ALK
 VERAMERINE PL JSG
 VERAMINE RT ALK
 VERAMININE RT ALK
 VERAREINE RT ALK
 VERARINE RT ALK
 VERASINE RT ALK
 VERATETRINE PL ALK
 VERATRAMINE RT ALK
 VERATRIDINE PL ALK
 VERATROBASINE RH HHB
 VERATROYLZYGADENINE RT ALK
 VERAZINE PL ALK
 VERINE RH HHB
 ZYGADENILIC-ACID-DELTA-LACTONE
 RT ALK

VERATRUM VIRIDE AIT.

“AMERICAN HELLEBORE”

“INDIAN POKE”

ACETIC-ACID RH HHB
 CEVADINE RT ALK
 CEVAGENINE PL JSG
 DEACETYLNEOPROTOVERATRINE RT
 ALK
 DEACETYLPROTOVERATRINE RH ALK
 GERMBUDINE RT ALK
 GERMERINE RT ALK
 GERMIBUDINE RT ALK
 GERMIDINE RT ALK
 GERMINE RT ALK
 GERMITRINE RT ALK
 1-ALPHA-HYDROXY-ALPHA-
 METHYLBUTYRIC-ACID RH HHB
 ISOGERMIDINE RT ALK
 ISORUBIJERVINE RH ALK
 JERVINE PL ALK
 EPSILON-JERVINE RT ALK
 1-ALPHA-METHYLBUTYRIC-ACID RH
 HHB
 NEOGERMBUDINE RT ALK
 NEOGERMIDINE RH ALK
 NEOGERMITRINE RT ALK
 PROTOVERATRIDINE RT ALK
 PROTOVERATRINE-A RT ALK
 PROTOVERATRINE-B RT ALK
 PSEUDOJERVINE RH ALK
 RUBIJERVINE RT ALK
 VERATETRINE RT ALK
 VERATRALBINE RH ALK

VERATRAMINE RT ALK
 VERATRIDINE RT ALK
 VERATRINE RT ALK
 VERATROSINE RT ALK
 VERATROYLZYGADENINE RT
 ALK

VERBASCUM THAPSUS L.

“MULLEIN”

ALUMINUM 1,090 LF PED
 ASCORBIC-ACID 776 LF PED
 ASH 86,000 LF PED
 AUCUBIN RT WOI
 CALCIUM 13,300 LF PED
 CARBOHYDRATES 803,000 LF
 PED
 BETA-CAROTENE 43 LF PED
 CATALPOL
 CHROMIUM 14 LF PED
 COBALT 128 LF PED
 COUMARIN LF WOI
 CROCETIN FL WOI
 FAT 13,000 LF PED
 FAT 35,000-271,000 SD HHB JAD
 FIBER 111,000 LF PED
 HEPTAOSE RT
 HESPERIDIN PL 411/
 IRON 2,360 LF PED
 KILOCALORIES 2,680 LF PED
 LINOLEIC-ACID (4.8-61.3%) SD
 HHB
 MAGNESIUM 3,230 LF PED
 MANGANESE 120 LF PED
 MUCILAGE 3,700 SD
 NIACIN 95 LF PED
 NONAOSE RT
 OCTAOSE RT
 OLEIC-ACID (29.2-30%) SD
 PALMITIC-ACID (30.96%) SD
 PHOSPHORUS 5,700 LF PED
 POTASSIUM 13,200 LF PED
 PROTEIN 108,000 LF PED
 PROTEIN 178,000-183,000 SD
 JAD
 RIBOFLAVIN 1.1 LF PED
 ROTENONE LF WOI
 SAPONINS
 SELENIUM 5 LF PED
 SILICON 74 LF PED
 BETA-SITOSTEROL SD WOI
 SODIUM 760 LF PED
 STEARIC-ACID (16.4%) SD HHB

THAPSIC-ACID 2,300 FL
 THIAMIN TR LF PED
 TIN 12 LF PED
 VERBASCOSIDE RT WOI
 VERBASCOSIDE PL 411/
 VERBASTEROL
 WATER 786,000 LF PED
 ZINC 4 LF PED

***VERBENA OFFICINALIS* L.**

“VERVAIN”

ADENOSINE LF WOI
 ARTEMITIN PL RAA
 AUCUBIN PL JSG
 CAFFEIC-ACID 10,000 LF HEG
 BETA-CAROTENE LF WOI
 CITRAL PL HHB
 EMULSIN FL WBB
 EO PL HHB
 HASTATOSIDE PL HHB
 5-HYDROXY-3,6,7,3',4'-
 PENTAMETHOXYFLAVONE PL JSG
 INVERTIN FL WBB
 LUPEOL PL JSG
 MUCILAGE PL HHB
 ALPHA-SITOSTEROL PL JSG
 STACHYOSE 20,000 RT WOI
 STACHYOSE 13,000 ST WOI
 TANNIN PL HHB
 TERPENENE PL HHB
 URSOLIC-ACID PL JSG
 VERBENALIN 3,000 PL HEG WOI
 VERBENALIN 5,000 FL HHB
 VERBENALOL PL WOI
 VERBENIN PL 411/
 (+)-VERBENONE PL JSG

***VERONICA OFFICINALIS* L.**

“COMMON SPEEDWELL;
 GYPSYWEED”

AUCUBIN PL HHB
 6-HYDROXYLUTEOLIN-7-
 MONOGLYCOSIDE PL JSG
 MANNITOL PL HHB
 MINECOSIDE PL JSG
 RESIN PL HHB
 TANNIN PL HHB
 VERMINOSIDE PL JSG
 VERONICOSIDE PL JSG
 VERPROSIDE PL JSG

***VETIVERIA ZIZANIOIDES* (L.)**

NASH

“VETIVER; CUS-CUS”

ALLO-KHUSINOL PL JSG
 D-ALPHA-AMORPHENE
 ASH 53,000-90,000 LF WOI
 BENZOIC-ACID RT GEO
 BHARATPUROL-I RT WOI
 BHARATPUROL-II RT WOI
 BICYCLODECENONE PL JSG
 7:3-CADALENE RT WOI
 CADINA-7-11(12 OR 13)-DIENE RT WOI
 CADINA-9,11(12 OR 13)-DIENE RT WOI
 (-)-CADINANE PL JSG
 CADINANE-SESQUITERPENES RT WOI
 L-GAMMA-CADINENE RT WOI
 L-GAMMA-2-CADINENE RT WOI
 L-DELTA-CADINOL RT WOI
 ALPHA-CALACORANE RT WOI
 CALCIUM 2,800-3,100 LF WOI
 CARBOHYDRATE 450,000-474,000 LF
 WOI
 DELTA-3-CARENE RT WOI
 CYCLOCOPACAMPHENE RT WOI
 CYCLOCOPACAMPHENIC-ACID PL JSG
 CYCLOCOPACAMPHENOL RT WOI
 P-CYMENE RT WOI
 DIACETYL RT HHB
 N-EICOSANE RT WOI
 ELEMOL RT WOI
 EO 2,000-33,000 RT GEO HHB
 EPICYCLOCOPACAMPHENIC-ACID PL
 JSG
 EPIKHUSINOL RT GEO
 EPIZIZANAL PL JSG
 EPIZIZANOIC-ACID PL JSG
 EUDESMANE-SESQUITERPENES RT
 WOI
 EUDESMOL RT WOI
 FAT 11,000-21,000 LF WOI
 FIBER 347,000-422,000 LF WOI
 FRUCTOSE RT WOI
 GLYCEROL RT WOI 1/
 GLUCOSE RT WOI
 HEMICELLULOSE 458,000 LF WOI
 ISOBISABOLENE RT WOI
 ISOKHUSENIC-ACID RT WOI
 ISOKHUSINOL PL JSG
 ISOKHUSINOL-OXIDE PL JSG
 ISOVALENCENIC-ACID PL JSG
 ISOVALENCENOL PL JSG
 ISOVETISELINENOL PL JSG

BETA-ISOVETISPIRENE RT HHB
 ALPHA-ISOVETIVENENE RT
 HHB
 ISOVETIVONE RT HHB
 KETONES 468-11,583 RT GEO
 KHUSENE RT WOI
 KHUSENOL PL JSG
 KHUSILAL RT WOI
 KHUSIMENE PL JSG
 KHUSIMONE RT WOI
 KHUSIMYL-ACETATE
 KHUSINOL RT WOI
 KHUSINOLOXIDE RT WOI
 KHUSIOL PL JSG
 (+)-KHUSITENE PL JSG
 KHUSITOL RT WOI
 KHUSITONE RT WOI
 KHUSOL RT WOI
 KHISONE RT WOI
 LAEVOJUNEOL RT WOI
 LAEVOJUNESSOL RT HHB
 LIMONENE RT WOI
 NORKHUSINOL-OXIDE PL JSG
 PALMITIC-ACID RT GEO
 PHOSPHORUS 500-6,000 FR WOI
 SELINA-4(14),7(17)-DIENE PL JSG
 SESQUITERPENE-KETONES 900-8,910
 RT WOI
 SUCROSE RT WOI
 TRICYCLOVETIVENE RT HHB
 VETICADINOL PL JSG
 VETISELINENE PL JSG
 VETISELINENOL RT WOI
 ALPHA-VETISPIRENE RT WOI
 BETA-VETISPIRINE RT WOI
 VETIVENE RT GEO
 ALPHA-VETIVENE PL JSG
 BETA-VETIVENE RT WOI
 GAMMA-VETIVENE RT WOI
 ALPHA-VETIVENENE PL JSG
 BETA-VETIVENENE RT WOI
 VETIVENOLENE 1,200-19,800 RT
 HHB
 VETIVENONE 240-4,290 RT HHB
 VETIVENYL-VETIVENATE RT GEO
 VETIVEROLS 2,700-21,450 RT WOI
 ALPHA-VETIVONE RT WOI
 BETA-VETIVONE RT WOI
 ZIZANAL PL JSG
 ZIZANENE RT WOI
 ZIZANOIC-ACID RT WOI
 ZIZANOL RT WOI

1/ first report of free glycerol from a plant

VIBURNUM OPULUS L.

"CRAMPBARK;
 GUELDER ROSE;
 EUROPEAN CRANBERRY BUSH"

ACETIC-ACID BK HHB
 AESCULETIN BK WOI
 ALUMINUM 702 BK PED
 ALPHA-AMYRIN BK HHB
 BETA-AMYRIN BK HHB
 ARBUTIN PL 411/
 ASTRAGALIN FL HHB
 BALDRIANIC-ACID BK HHB
 CALCIUM 23,540 BK PED
 CAPRIC-ACID BK HHB
 DL-CATECHIN BK HHB
 CHLOROGENIC-ACID FR
 HHB
 CHROMIUM 21 BK PED
 CINNAMIC-ACID FR HHB
 CITRIC-ACID BK HHB
 COBALT 115 BK PED
 EO 1,000-3,000 BK WOI
 EPICATECHIN BK HHB
 HYDROQIONONE PL 411/
 IRON 880 BK PED
 MAGNESIUM 3,110 BK PED
 MALIC-ACID BK HHB
 MANGANESE 49 BK PED
 METHYL-ARBUTIN PL 411/
 MYRICYL-ALCOHOL BK
 HHB
 PAEONISIDE FR HHB
 PECTIN BK HHB
 PECTIN 50,000 FR HHB
 PHOSPHORUS 650 BK PED
 POTASSIUM 7,360 BK PED
 PROTEIN 86,000 BK PED
 QUERCETIN-GLYCOSIDES FR
 HHB
 SCPOLETIN BK WOI
 SCOPOLINE PL 411/
 SELENIUM 23 BK PED
 SILICON 99 BK PED
 BETA-SITOSTEROL FR HHB
 SODIUM 184 BK PED
 TANNIN 30,000 FR HHB
 TIN 18 BK PED
 URSOLIC-ACID FR HHB
 VALERIANIC-ACID PL KAD
 WATER 782,000 BK PED
 ZINC 17 BK PED

VIBURNUM PRUNIFOLIUM L.**"BLACK HAW"**

ACETIC-ACID BK HHB
 ACETYLOLEANOLIC-ACID BK HHB
 ACETYLURSOLIC-ACID BK HHB
 AESCULETIN BK HHB WOI
 AMENTOFLAVONE BK HHB
 ALPHA-AMYRIN BK HHB
 BETA-AMYRIN BK HHB
 ARBUTIN BK HHB
 CAPRONIC-ACID BK HHB
 CAPRYLIC-ACID BK HHB
 D-CATECHIN LF HHB
 CHLOROGENIC-ACID BK HHB
 CITRIC-ACID RT BK AYL
 DEXTRIN 5,000 BK HHB
 EO 3,000 BK HHB
 FORMIC-ACID BK HHB
 HEPTACOSANE BK HHB
 ISOCHLOROGENIC-ACID BK HHB
 ISOVALERIANIC-ACID BK HHB
 LINOLEIC-ACID BK HHB
 MALIC-ACID RT BK AYL
 1-METHYL-2,3-DIBUTYL-
 HEMIMELLITATE ST BK AYL
 MYRISTIC-ACID BK HHB
 OLEANOLIC-ACID BK HHB
 OLEIC-ACID BK HHB
 OXALIC-ACID RT BK AYL
 PALMITIC-ACID BK HHB
 PENTOSANS 160,000 BK HHB
 PROTEIN 24,000 BK HHB
 RESIN RT BK AYL
 SACCHAROSE 3,000 BK HHB
 SALICIN BK HHB WOI
 SALICYLIC-ACID BK HHB
 SCOPOLETIN RT BK AYL WOI
 SCOPOLIN BK WICHTL
 SITOSTEROL BK WICHTL
 STARCH 55,000 BK HHB
 TANNIN 20,000 RT BK AYL
 URSOLIC-ACID BK HHB
 VALERIC-ACID RT BK AYL
 VIBURNIN BK 411/

VICIA FABA L.**"BROADBEAN"****"FABA BEAN"**

ALANINE 2,280-12,000 SD USA
 ARGININE 4,630-24,370 SD USA
 ARSENIC 0.2-1.4 FR WOI

ASCORBIC-ACID 120-820 FR WOI
 ASCORBIC-ACID 330-1,735 SD USA
 ASH 8,000-54,800 FR WOI
 ASH 11,000-57,900 SD USA
 ASPARAGINE LF WOI
 ASPARTIC-ACID 6,310-33,210 SD USA
 BETULIN RT HHB
 BIOTIN 0.03 SD WOI
 BUTEIN 0.02-7 FR JAF39:255
 CAFFEIC-ACID PL JLS58:133
 CALCIUM 500-3,425 FR WOI
 CALCIUM 220-3,116 SD USA
 CARBOHYDRATES 117,000-615,790 SD
 USA
 BETA-CAROTENE 0.1-0.6 FR WOI
 BETA-CAROTENE 2.1-11 SD USA
 CHLORINE 430-2,945 FR WOI
 CHOLESTEROL 400 OI WOI
 CHOLINE 50-340 FR WOI
 CITRIC-ACID FR WOI
 CONVICINE 600 FR WOI
 COPPER 1.7 FR WOI
 P-COUMARIC-ACID PL JLS58:133
 BETA-CYANOALANINE SD HHB
 CYSTINE 770-4,050 SD USA
 2,6-DIAMINOPURINE RT WOI
 7,4'-DIHYDROXYFLAVONE 0.01-4 FR
 JAF39:255
 DIVICINE FR WOI
 DOPA LF WOI
 L-DOPA 110,000 FL NAP
 L-DOPA 2,500-25,000 FR NAP WOI
 L-DOPA 1,500-2,500 SD NAP
 L-DOPA 34,560 ST NAP
 DOPA-GLUCOSIDE SH WOI
 FAT 1,000-6,850 FR WOI
 FAT 6,000-31,580 SD USA
 FERULIC-ACID PL JLS58:133
 FIBER 20,000-137,000 FR WOI
 FIBER 22,000-115,780 SD USA
 FUMARIC-ACID RT HHB
 GERALDONE 0.02-6 FR JAF39:255
 GIBBERELLIN-A-53 PL JSG
 GLUTAMIC-ACID 8,550-45,000 SD USA
 GLYCERIC-ACID FR WOI
 GLYCINE 2,300-12,100 SD USA
 HCN SD WOI
 HEXOSAMINE SD WOI
 HISTIDINE 1,340-7,050 SD USA
 P-HYDROXYBENZOIC-ACID SH WOI
 GAMMA-HYDROXYCITRULLIN SD
 HHB
 D-HYDROXYLYSINE SD WOI
 5-HYDROXYURACIL RT WOI

IODINE 0.09-0.6 FR WOI
 IRON 19-100 SD USA
 (+)-7-ISOJASMONIC-ACID PL JSG
 ISOLEUCINE 2,510-13,210 SD USA
 (-)-JASMONIC-ACID PL JSG
 KAEMPFEROL SH WOI
 KAEMPFEROL-3-(6"-
 ACETYL)GALACTOSIDE-7-
 RHAMNOSIDE 13-738 FR JAF39:255
 KAEMPFEROL-3-GALACTOSIDE-7-
 RHAMNOSIDE 8-267 FR JAF39:255
 KAEMPFEROL-3-GLUCOSIDE 0.01-1 FR
 JAF39:255
 KAEMPFEROL-7-GLUCOSIDE 0.03-1.3FR
 JAF39:255
 KAEMPFEROL-3-
 (2"RHAMNOSYL)GALACTOSIDE-7-
 RHAMNOSIDE 3-220 FR JAF39:255
 KAEMPFEROL-3-RHAMNOSYL-
 (6"-ACETYL)GALACTOSIDE-7-
 RHAMNOSIDE 8-653 FR JAF39:255
 KILOCALORIES 720-3,790 SD USA
 LEUCINE 4,320-22,735 SD USA
 LEUCOCYANIDIN SD WOI
 LEUCODELPHINIDIN SD WOI
 LINOLEIC-ACID 1,200-6,315 SD USA
 LINOLENIC-ACID 1,890-9,950 SD USA
 LYSINE 3,660-19,265 SD USA
 MAGNESIUM 330-2,260 FR WOI
 MAGNESIUM 380-2,000 SD USA
 MALIC-ACID FR WOI
 MEDICARPIN PL JSG
 METHIONINE 430-2,265 SD USA
 MUFA 170-895 SD USA
 MYRISTIC-ACID 0 SD USA
 NIACIN 8-55 FR WOI
 NAICIN 15-75 SD USA
 OLEIC-ACID 170-895 SD USA
 OXALIC-ACID 10-70 FR WOI
 PALMITIC-ACID 1,210-6,370 SD USA
 PALMITOLEIC-ACID 0 SD USA
 PANTOTHENIC-ACID 50 SD WOI
 PHENYLALANINE 2,280-12,000 SD
 USA
 PHOSPHATIDES 12,000 SD WOI
 PHOSPHORUS 740-5,070 FR WOI
 PHOSPHORUS 950-5,000 SD USA
 PIPECOLIC-ACID 4,400-4,915 SD WOI
 POTASSIUM 390-2,670 FR WOI
 POTASSIUM 2,500-13,160 SD USA
 PROLINE 2,520-13,265 SD USA
 PROTEIN 45,000-308,200 FR WOI
 PROTEIN 56,000-294,735 SD USA
 PUFA 3,100-16,315 SD USA

QUERCETIN-3-GALACTOSIDE-7-
 RHAMNOSIDE 9-1,480 FR JAF39:255
 QUERCETIN-3-
 (6"-ACETYL)GALACTOSIDE-7-
 RHAMNOSIDE 7-720 FR JAF39:255
 QUERCETIN-TRIGLYCOSIDE 2-120 FR
 JAF39:255
 RIBOFLAVIN 1.1-6 SD USA
 SERINE 2,460-12,950 SD USA
 SFA 1,380-7,265 SD USA
 SINAPIC-ACID PL JLS58:133
 SODIUM 435-2,980 FR WOI
 SODIUM 500-2,630 SD USA
 STEARIC-ACID 170-895 SD USA
 STIZOLAMINE SD CCO
 SULFUR 530-3,630 FR WOI
 3,5,7,4'-TETRAHYDROXYFLAVONE
 0.01-6 FR JAF39:255
 THIAMIN 0.8-5.4 FR WOI
 THIAMIN 1.7-9 SD USA
 THREONINE 2,080-10,950 SD USA
 7,3',4'-TRIHYDROXYFLAVONE 0.01-22
 FR JAF39:255
 TRYPTOPHAN 560-2,950 SD USA
 TYROSINE 1,960-10,315 SD USA
 VALINE 2,740-14,420 SD USA
 VICINE 5,000 FR WOI
 WATER 854,000 FR WOI
 WATER 810,000 SD USA
 WAX 1,400 LF WOI
 WYERONE 10-335 SP WOI
 WYERONE-EPOXIDE PL JSG

***VIGNA ACONITIFOLIA* (JACQ.)
 MARECHAL**

“MOTH BEAN; MAT BEAN”

ASCORBIC-ACID 20-44 SD USA
 ASH 144,000 FR CRC
 ASH 138,000 LF CRC
 ASH 126,000-138,000 PL CRC
 ASH 35,000-56,000 SD CRC USA
 CALCIUM 20,100 FR CRC
 CALCIUM 23,400 LF CRC
 CALCIUM 23,400-23,700 PL CRC
 CALCIUM 1,360-3,500 SD CRC USA
 CARBOHYDRATES 731,000 FR CRC
 CARBOHYDRATES 738,000 LF CRC
 CARBOHYDRATES 700,000-737,000 PL
 CRC
 CARBOHYDRATES 615,200-681,134 SD
 USA
 BETA-CAROTENE 0.2 SD USA

CHLORINE 90-101 SD WOI
 COPPER 5-9 SD USA
 CYSTINE 1,170-1,295 SD USA
 FAT 29,000 FR CRC
 FAT 19,000 LF CRC
 FAT 19,000 PL CRC
 FAT 6,000-24,520 SD CRC USA
 FIBER 194,000 FR CRC
 FIBER 268,000 LF CRC
 FIBER 197,000-268,000 PL CRC
 FIBER 35,150-53,000 SD CRC USA WOI
 GLUTAMIC-ACID-DEHYDROXYLASE
 HISTIDINE 7,710-8,536 SD USA
 IRON 88-143 SD USA
 ISOLEUCINE 11,380-12,600 SD USA
 KILOCALORIES 3,430-3,798 SD USA
 LEUCINE 15,410-17,062 SD USA
 LINOLEIC-ACID 4,850-5,370 SD USA
 ALPHA-LINOLENIC-ACID 2,650-2,934 SD USA
 LYSINE 12,480-13,818 SD USA
 MAGNESIUM 2,250-4,962 SD USA WOI
 MANGANESE 18-20 SD USA
 METHIONINE 2,200-2,436 SD USA
 MUFA 1,290-1,428 SD USA
 NIACIN 28-31 SD USA
 OLEIC-ACID 1,290-1,428 SD USA
 PALMITIC-ACID 3,130-3,465 SD USA
 PHENYLALANINE 10,280-11,382 SD USA
 PHOSPHORUS 2,500 FR CRC
 PHOSPHORUS 1,800 LF CRC
 PHOSPHORUS 1,800-5,400 PL CRC
 PHOSPHORUS 2,300-5,418 SD USA
 PHYTIN-PHOSPHORUS 575-645 SD USA
 POTASSIUM 10,965-14,230 SD USA
 PROTEIN 96,000 FR CRC
 PROTEIN 106,000 LF CRC
 PROTEIN 106,000-155,000 PL CRC
 PROTEIN 227,280-296,000 SD CRC USA
 PUFA 7,500-8,304 SD USA
 RIBOFLAVIN 0.9-1.0 SD USA
 SFA 3,640-4,030 SD USA
 SODIUM 295-332 SD USA
 STARCH 266,000 SD USA
 STEARIC-ACID 510-565 SD USA
 SULFUR 1,800-2,018 SD USA
 THIAMIN 5.6-6.2 SD USA
 TRYPTOPHAN 1,470-1,628 SD USA
 VALINE 7,340-8,127 SD USA
 WATER 90,130-108,000 SD USA WOI
 ZINC 19-21 SD USA

VIGNA ANGULARIS (WILLD.)
OHWI & H. OHASHI

“ADZUKI BEAN”

ALANINE 11,600-13,401 SD USA
 ARGININE 12,840-14,834 SD USA
 ASCORBIC-ACID 0 SD USA
 ASH 32,600-37,622 SD USA
 ASPARTIC-ACID 23,550-27,207 SD USA
 AZUKISAPOGENOL PL JSG
 CALCIUM 660-762 SD USA
 CARBOHYDRATES 629,000-726,664 SD USA
 CARNAUBIC-ACID(?) 265-305 SD USA
 BETA-CAROTENE 0.1-0.9 SD USA
 COPPER 11-13 SD USA
 CUORIN SD WOI
 CYSTINE 1840-2,126 SD USA
 DELPHINIDIN-3-MONOGLUCOSIDE SD WOI
 FAT 5,300-6,123 SD USA
 FIBER 36,290-79,591 SD USA
 ALPHA-GLOBULIN SD WOI
 BETA-GLOBULIN SD WOI
 GLUTAMIC-ACID 30,990-35,802 SD USA
 GAMMA-L-GLUTAMYL-L-BETA-PHENYL-BETA-ALANINE SD WOI
 GLYCINE 7,560-8,734 SD USA
 HISTIDINE 5,240-6,054 SD USA
 IRON 50-58 SD USA
 ISOLEUCINE 7,910-9,138 SD USA
 KILOCALORIES 3,290-3,800 SD USA
 LEUCINE 16,680-19,270 SD USA
 LYSINE 14,970-17,294 SD USA
 MAGNESIUM 1,270-1,467 SD USA
 MANGANESE 17-20 SD USA
 METHIONINE 2,100-2,426 SD USA
 NIACIN 21-36 SD USA
 PALMITIC-ACID 331-381 SD USA
 PHENYLALANINE 10,520-12,153 SD USA
 PHOSPHORUS 3,810-4,402 SD USA
 PHYTOSTEROLS 760-878 SD USA
 PIPECOLIC-ACID 650 SD USA
 POTASSIUM 12,540-14,487 SD USA
 PROLINE 8,740-10,097 SD USA
 PROTEIN 198,700-229,552 SD USA
 RIBOFLAVIN 1.8-3.0 SD USA
 ROBININ LF WOI
 SERINE 9,760-11,275 SD USA
 SODIUM 50-58 SD USA
 STEARIC-ACID 662-762 SD WOI
 STIGMASTEROL SD WOI
 THIAMIN 3.4-6.6 SD USA

THREONINE 6,740-7,787 SD USA
 TRYPTOPHAN 1,910-2,207 SD USA
 TYROSINE 5,910-6,828 SD USA
 VALINE 10,230-11,818 SD USA
 WATER 134,400 SD USA
 ZINC 50-58 SD USA

VIGNA MUNGO (L.) HEPPER

“BLACK GRAM”

ALLANTOIN SD WOI
 ARSENIC 0.162 SD HAM33(4):42
 ALLANTOINASE SD WOI
 ASCORBIC-ACID 0-22 SD CRC
 ASCORBIC-ACID 426 SP WOI
 ASH 122,000 FR CRC
 ASH 126,000 PL CRC
 ASH 32,000-36,000 SD CRC
 ASPARAGINE SD WOI
 BEHENIC-ACID 837-2,325 SD WOI
 CADMIUM 0.175 SD HAM33(4):42
 CALCIUM 27,100 FR CRC
 CALCIUM 17,400 PL CRC
 CALCIUM 1,100-2,220 SD CRC
 CARBOHYDRATES 765,000 FR CRC
 CARBOHYDRATES 757,000 PL CRC
 CARBOHYDRATES 594,000-660,000 SD CRC
 CAROTENE 12-14 SP WOI
 BETA-CAROTENE 0.2-0.5 SD CRC
 CELLOBIOSE SD WOI
 CHLORINE 90-101 SD WOI
 CHOLINE 2,060 SD WOI
 CONIFERIN SP WOI
 COPPER 7.2-8.0 SD WOI
 DEHYDROASCORBIC-ACID SP WOI
 DIETHYLSTILBESTEROL 0.018 SD WOI
 FAT 23,000 FR CRC
 FAT 28,000 PL CRC
 FAT 9,000-25,000 SD CRC WOI
 FIBER 9,000-299,000 FR CRC WOI
 FIBER 286,000 PL CRC
 FIBER 9,000-10,000 SD CRC
 FOLIC-ACID 1.3 SD WOI
 GLUTATHIONE SD WOI
 P-HYDROXYCINNAMIC-ACID SP WOI
 HYDROXYLAMINE SP WOI
 INDOLE-3-ACETAMIDE SP WOI
 INDOLE-3-CARBOXYALDEHYDE SP WOI
 IODINE 0.034 SD WOI
 IRON 84-102 SD CRC
 KILOCALORIES 3,340-3,890 SD CRC
 LACTOSE SD WOI

LEAD 3.832 SD HAM33(4):42
 LECITHIN 16,000 SD WOI
 LIGNOCERIC 342-950 SD WOI
 LINOLEIC-ACID 1,467-4,075 SD WOI
 LINOLENIC-ACID 3,213-8,925 SD WOI
 MAGNESIUM 1,850-2,076 SD WOI
 MALTOSE SD WOI
 MELIBIOSE SD WOI
 MERCURY 0.045 SD HAM33(4):42
 NIACIN 20-26 SD CRC
 NICKEL 5.664 SD HAM33(4):42
 OLEIC-ACID 1,872-5,200 SD WOI
 OXALIC-ACID 278 SD WBB
 PALMITIC-ACID 1,269-3,525 SD WOI
 PHENYLALANINE SP WOI
 PHOSPHORUS 1,900 FR CRC
 PHOSPHORUS 1,600 PL CRC
 PHOSPHORUS 348-4,321 SD CRC
 PHYTASE SD WOI
 PHYTIN-PHOSPHORUS 1,690-1,897 SD WOI
 POTASSIUM 1,710-89,790 SD CRC
 PROTEIN 90,000 FR CRC
 PROTEIN 89,000 PL CRC
 PROTEIN 21,000-269,000 SD CRC
 RAFFINOSE 5,100 SD WOI
 RIBOFLAVIN 2.0-2.2 SD CRC
 SHIKIMIC-ACID SP WOI
 SODIUM 398-449 SD CRC WOI
 STACHYOSE 18,000 SD WOI
 STEARIC-ACID 387-1,075 SD WOI
 SUCROSE 16,000 SD WOI
 SULFUR 1,740-1,953 SD CRC
 THIAMIN 4.2-6.5 SD CRC
 VERBASCOSE 37,000 SD WOI
 VIT-B12 SD WOI
 WATER 98,000-106,000 SD CRC

VIGNA RADIATA (L.) WILCZEK

“MUNGBEAN; GREEN GRAM”

ADENOSINE-DIPHOSPHATE SP WOI
 ADENOSINE-DIPHOSPHATE-D-RIBOSE SP WOI
 ADENOSINE-5'-MONOPHOSPHATE SP WOI
 ADENOSINE-TRIPHOSPHATE SP WOI
 ALANINE 10,500-11,545 SD USA
 ALANINE 990-10,399 SP USA
 ARACHIDIC-ACID 117-135 SD WOI
 ARGININE 16,720-18,383 SD USA
 ARGININE 1,970-20,693 SP USA
 ARSENIC 0.090 SD HAM33(4):42
 ASCORBIC-ACID 48-53 SD USA

- ASCORBIC-ACID 113-1,506 SP USA
 ASCORBIGEN 24-26 SD WOI
 ASH 32,210-37,609 SD USA
 ASH 3,750-53,025 SP USA
 ASPARAGINE SD WOI
 ASPARTIC-ACID 27,560-30,302 SD USA
 ASPARTIC-ACID 4,790-50,315 SP USA
 BEHENIC-ACID 312-360 SD WOI
 BIOCHANIN-A PL PAS
 CADMIUM 0.165 SD HAM33(4):42
 CALCIUM 1,183-1,602 SD USA
 CALCIUM 110-1,571 SP USA
 CARBOHYDRATES 626,200-688,510 SD USA
 CARBOHYDRATES 59,300-622,899 SP USA
 BETA-CAROTENE 0.9-1.2 SD USA
 BETA-CAROTENE 0.1-1.4 SP USA
 CEROTIC-ACID 819-945 SD WOI
 CHLORINE 120-278 SD WOI
 CHOLINE 1,670-1,856 SD WOI
 COPPER 9-13 SD USA
 COPPER 1-23 SP USA
 P-COUMARIC-ACID PL PAS
 COUMESTROL SP WOI
 CYSTINE 2,100-2,309 SD USA
 CYSTINE 170-1,786 SP USA
 CYTIDINE-5'-MONOPHOSPHATE SP WOI
 DAIDZEIN PL PAS
 FAT 10,060-14,234 SD USA
 FAT 1,350-23,625 SP USA
 FIBER 44,950-66,495 SD USA
 FIBER 7,200-94,500 SP USA
 FLAVADENINE-DINUCLEOTIDE SP WOI
 FOLACIN 5.8-7.3 SD USA
 FOLACIN 0.539-7.105 SP USA
 FOLIC-ACID 1.4-1.6 SD WOI
 FORMONONETIN PL PAS
 FUCOSE SD WOI
 GALACTOSE SD WOI
 GENISTEIN PL PAS
 GLUCOSE SD WOI
 GLUTAMIC-ACID 42,640-46,883 SD USA
 GLUTAMIC-ACID 1,610-16,912 SP USA
 GLUTATHIONE SP WOI
 GLYCINE 9,540-10,489 SD USA
 GLYCINE 930-6,618 SP USA
 GUANOSINE-5'-MONOPHOSPHATE SP WOI
 HEMICELLULOSE SD WOI
 HISTIDINE 6,950-7,642 SD USA
 HISTIDINE 700-7,353 SP USA
 HOMOGLUTATHIONE SP WOI
 HYDROXYLAMINE RT WOI
 IMIDAZOLEACRYLIC-ACID SP WOI
 INOSITOL SD WOI
 IODINE 0.034-0.037 SD WOI
 IRON 58-84 SD USA
 IRON 5.6-132 SP USA
 ISOLEUCINE 10,080-11,083 SD USA
 ISOLEUCINE 1,320-13,866 SP USA
 KILOCALORIES 3,340-3,815 SD USA
 KILOCALORIES 3151 SP USA
 LEAD 1.570 SD HAM33(4):42
 LEUCINE 18,470-20,308 SD USA
 LEUCINE 1,750-18,382 SP USA
 LINOLEIC-ACID 3,570-4,890 SD USA
 WOI
 LINOLEIC-ACID 420-4,412 SP USA
 LINOLENIC-ACID 1,872-2,160 SD WOI
 ALPHA-LINOLENIC-ACID 270-297 SD USA
 ALPHA-LINOLENIC-ACID 160-1,681 SP USA
 LYSINE 16,640-18,296 SD USA
 LYSINE 1,666-17,437 SP USA
 MAGNESIUM 1,777-2,203 SD USA
 MAGNESIUM 176-2,560 SP USA
 MANGANESE 9.6-12.2 SD USA
 MANGANESE 1.4-25 SP USA
 MANNOSE SD WOI
 MERCURY 0.036 SD HAM33(4):42
 METHIONINE 2,860-3,145 SD USA
 METHIONINE 340-3,571 SP USA
 MUFA 1,610-1,770 SD USA
 MUFA 220-2,311 SP USA
 MYRISTIC-ACID 0 SP USA
 NARINGENIN PL PAS
 NIACIN 21-27 SD USA
 NIACIN 6.8-85 SP USA
 NICKEL 3.456 SD HAM33(4):42
 OLEIC-ACID 832-1,770 SD USA
 OLEIC-ACID 220-2,311 SP USA
 PALMITIC-ACID 2,500-4,215 SD USA
 WOI
 PALMITIC-ACID 320-3,361 SP USA
 PANTOTHENIC-ACID 18-22 SD USA
 PANTOTHENIC-ACID 2.9-48 SP USA
 PECTIN SD WOI
 PHENYLALANINE 14,430-15,865 SD USA
 PHENYLALANINE 1,170-12,290 SP USA
 PHOSPHORUS 3,260-4,500 SD USA WOI
 PHOSPHORUS 455-6,560 SP USA
 PHYTIN-PHOSPHORUS 1,480-2,322 SD WOI
 PHYTOSTEROLS 230-253 SD USA
 PHYTOSTEROLS 150-1,576 SP USA
 POTASSIUM 12,038-14,170 SD USA

POTASSIUM 1,256-18,092 SP USA
 PROLINE 10,950-12,090 SD USA
 PROTEIN 234,890-266,541 SD USA
 PROTEIN 25,740-368,130 SP USA
 PUFA 3,840-4,222 SD USA
 PUFA 580-6,092 SP USA
 PYRIDOXINE SD WOI
 QUINIC-ACID SD WOI
 RAFFINOSE 8,000 SD WOI
 RHAMNOSE SD WOI
 RIBOFLAVIN 2.1-2.8 SD USA
 RIBOFLAVIN 1-15 SP USA
 RIBOSE SD WOI
 ROBININ PL PAS
 SERINE 11,760-12,930 SD USA
 SERINE 330-3,466 SP USA
 SFA 3,480-3,826 SD USA
 SFA 460-4,831 SP USA
 SHIKIMIC-ACID SD WOI
 SODIUM 129-311 SD USA WOI
 SODIUM 45-782 SP USA
 STACHYOSE 25,000 SD WOI
 STEARIC-ACID 710-1,170 SD USA
 WOI
 STEARIC-ACID 80-840 SP USA
 STIGMASTEROL 230 SD USA
 SUCROSE 18,000 SD WOI
 SULFUR 1,880-2,378 SD WOI
 THIAMIN 5.4-7.7 SD USA
 THIAMIN 0.7-10.3 SP USA
 THREONINE 7,820-8,598 SD USA
 THREONINE 780-8,192 SP USA
 TRYPTOPHAN 2,600-2,859 SD USA
 TRYPTOPHAN 370-3,886 SP USA
 TYROSINE 7,140-7,850 SD USA
 TYROSINE 520-5,462 SP USA
 URIDINE-DIPHOSPHATE SP WOI
 URIDINE-DIPHOSPHATE-N-ACETYL-
 GLUCOSAMINE SP WOI
 URIDINE-DIPHOSPHATE-GALACTU-
 RONIC-ACID SP WOI
 URIDINE-DIPHOSPHATE-GLUCURONIC-
 ACID SP WOI
 URIDINE-5'-MONOPHOSPHATE SP WOI
 UROCANIC-ACID SP WOI
 VALINE 12,370-13,600 SD USA
 VALINE 1,300-13,655 SP USA
 VERBASCOSIDE 38,000 SD WOI
 VIT-B6 3.7-4.3 SD USA
 VIT-B6 0.8-11 SP USA
 VIT-B12 SD WOI
 WATER 86,100-94,890 SD USA
 WATER 888,140 SP USA
 XYLOSE SD WOI

ZINC 26-31 SD USA
 ZINC 3.5-48 SP USA

VIGNA SUBTERRANEA (L.)

VERDC.

“BAMBARRA GROUNDNUT;
 GROUND BEAN”

ASH 54,000 FR CRC
 ASH 75,000 PL CRC
 ASH 18,000-42,000 SD CRC
 CALCIUM 100-945 SD CRC
 CARBOHYDRATES 709,000 FR CRC
 CARBOHYDRATES 748,000 PL CRC
 CARBOHYDRATES 300,000-703,000 SD
 CRC
 BETA-CAROTENE 0-0.11 SD CRC
 FAT 55,000 FR CRC
 FAT 18,000 PL CRC
 FAT 31,000-92,000 SD CRC
 FIBER 142,000 FR CRC
 FIBER 31,700 PL CRC
 FIBER 30,000-70,000 SD CRC
 IRON 12-136 SD CRC
 KILOCALORIES 1,520-4,120 SD CRC
 NIACIN 18-20 SD CRC
 PHOSPHORUS 2,240-6,042 SD CRC
 PROTEIN 182,000 FR CRC
 PROTEIN 159,000 PL CRC
 PROTEIN 78,000-213,000 SD CRC
 RIBOFLAVIN 1.4-1.6 SD CRC
 THIAMIN 1.8-5.2 SD CRC
 WATER 101,000-573,000 SD CRC

VIGNA UNGUICULATA (L.)

WALP.

“YARLONG BEAN;
 ASPARAGUS BEAN”

ALANINE 11,090-12,111 SD USA
 ARGININE 1,960-16,131 FR USA
 ARGININE 16,850-18,401 SD USA
 ASCORBIC-ACID 56-2,633 FR USA
 ASCORBIC-ACID 16-17 SD USA
 ASH 6,000-49,383 FR USA
 ASH 39,270-45,132 SD USA
 ASPARTIC-ACID 29,380-32,085 SD USA
 CALCIUM 500-4,115 FR USA
 CALCIUM 1,255-1,643 SD USA
 CARBOHYDRATES 83,500-687,243 FR
 USA
 CARBOHYDRATES 619,000-676,095 SD
 USA

BETA-CAROTENE 1.5-72 FR USA
 BETA-CAROTENE 0.3 SD USA
 COPPER 9-10 SD USA
 CYSTINE 420-3,457 FR USA
 CYSTINE 2,690-2,938 SD USA
 ERUCIC-ACID 130-1,070 FR USA
 FAT 4,000-32,922 FR USA
 FAT 13,100-14,306 SD USA
 FIBER 47,700-52,090 SD USA
 FOLACIN 6.5-7.2 SD USA
 HISTIDINE 900-7,407 FR USA
 HISTIDINE 7,550-8,245 SD USA
 IRON 1-69 FR USA
 IRON 86-94 SD USA
 ISOLEUCINE 1,500-12,346 FR USA
 ISOLEUCINE 9,890-10,800 SD USA
 KILOCALORIES 470-3,868 FR USA
 KILOCALORIES 3,470-3,789 SD USA
 LEUCINE 2,000-16,461 FR USA
 LEUCINE 18,640-20,356 SD USA
 LINOLEIC-ACID 960-7,901 FR USA
 LINOLEIC-ACID 3,080-3,364 SD USA
 ALPHA-LINOLENIC-ACID 700-5,761 FR USA
 ALPHA-LINOLENIC-ACID 2,580-2,817 SD USA
 LYSINE 1,840-15,144 FR USA
 LYSINE 16,460-17,975 SD USA
 MAGNESIUM 374-4,160 FR USA
 MAGNESIUM 3,141-3,952 SD USA
 MANGANESE 16-17 SD USA
 METHIONINE 400-3,292 FR USA
 METHIONINE 3,460-3,779 SD USA
 MUFA 360-2,963 FR USA
 MUFA 1,140-1,245 SD USA
 MYRISTIC-ACID 10-82 FR USA
 MYRISTIC-ACID 10-11 SD USA
 NIACIN 1-59 FR USA
 NIACIN 21-24 SD USA
 OLEIC-ACID 210-1,728 FR USA
 OLEIC-ACID 1,140-1,245 SD USA
 PALMITIC-ACID 840-6,913 FR USA
 PALMITIC-ACID 3,180-3,473 SD USA
 PALMITOLEIC-ACID 10-82 FR USA
 PANTOTHENIC-ACID 15-17 SD USA
 PHENYLALANINE 1,540-12,675 FR USA
 PHENYLALANINE 14,210-15,518 SD USA
 PHOSPHORUS 590-4,856 FR USA
 PHOSPHORUS 5,342-6,375 SD USA
 POTASSIUM 2,101-22,212 FR USA
 POTASSIUM 11,570-12,635 SD USA
 PROTEIN 28,000-230,453 FR USA
 PROTEIN 238,800-270,598 SD USA
 PUFA 1,690-13,909 FR USA

PUFA 5,650-6,170 SD USA
 RIBOFLAVIN 1.1-9 FR USA
 RIBOFLAVIN 2.3-2.6 SD USA
 SFA 1,050-8,642 FR USA
 SFA 3,390-3,702 SD USA
 SODIUM 39-333 FR USA
 SODIUM 170-186 SD USA
 STEARIC-ACID 130-1,070 FR USA
 STEARIC-ACID 200-218 SD USA
 THIAMIN 0.8-10 FR USA
 THIAMIN 9-10 SD USA
 THREONINE 1,040-8,560 FR USA
 THREONINE 9,260-10,112 SD USA
 TRYPTOPHAN 320-2,634 FR USA
 TRYPTOPHAN 3,000-3,276 SD USA
 TYROSINE 1,150-9,465 FR USA
 TYROSINE 7,860-8,584 SD USA
 VALINE 1,620-13,333 FR USA
 VALINE 11,600-12,688 SD USA
 VIGNAFURAN PL JSG
 VIT-B6 3.7-4 SD USA
 WATER 872,000-884,560 FR USA
 WATER 83,120-85,480 SD USA
 ZINC 35-38 SD USA

VIGNA UNGUICULATA (L.) WALP.

"COWPEA"

ALANINE 9,830-12,175 SD USA
 EFN26:71
 ALUMINUM 6-840 SD USG
 BETA-AMYLASE SD WOI
 AMYLOSE 108,420-111,200 SD WOI
 ANTIMONY 0-0.031 SD JSF55:401
 ARACHIDIC-ACID 86 SD WOI
 ARGININE 2,070-18,500 SD USA
 ASCORBIC-ACID 15-75 SD USA
 ASCORBIC-ACID 360-3,523 SH USA
 ASH 16,000-120,000 SD USA USG
 ASH 10,500-102,740 SH USA
 ASPARTIC-ACID 25,730-32,254 SD USA
 EFN26:71
 BARIUM 1-60 SD USG JSF55:401
 BEHENIC-ACID 380 SD WOI
 BORON 3-60 SD USG
 CALCIUM 253-14,400 SD USA USG
 CALCIUM 630-6,164 SH USA
 CARBOHYDRATES 218,000-681,771 SD USA
 CARBOHYDRATES 48,200-471,624 SH USA
 BETA-CAROTENE 0.3-21.9 SD USA
 BETA-CAROTENE 0.7-6.9 SH USA

CERIUM 0-0.1 SD JSF55:401
 CESIUM 0.005-0.174 SD JSF55:401
 CHLORINE 100 SD WOI
 CHOLINE 2,020 SD WOI
 CHROMIUM 0-3.6 SD USG
 COBALT 0-1.2 SD USG
 COPPER 1.3-12 SD USA USG
 CYSTINE 440-2,953 SD USA
 ERUCIC-ACID 120-753 SD USA
 ERUCIC-ACID 80-783 SH USA
 EUROPIUM 0-0.002 SD JSF55:401
 FAT 8,000-24,300 SD USA JSF55:401
 FAT 2,500-24,462 SH USA
 FIBER 14,000-14,630 SD USA JSF55:401
 FIBER 13,000-127,202 SH USA
 FOLACIN 1.6-7.6 SD USA
 FOLIC-ACID 8.9 FR WOI
 FOLIC-ACID 0.8-4.1 SD WOI
 GLUCOSE-6-PHOSPHATASE SD WOI
 GLUTAMIC-ACID 43,190 SD EFN26:71
 GLYCEROPHOSPHATASE LF WOI
 GLYCINE 8,550 SD EFN26:71
 HISTIDINE 950-8,290 SD USA
 IRON 10-240 SD USA USG
 IRON 19-188 SH USA
 ISOLEUCINE 1,580-10,857 SD USA
 KILOCALORIES 1,270-3,825 SD USA
 KILOCALORIES 290-2,837 SH USA
 LEAD 0.4-8.4 SD USG
 LEUCINE 2,111-20,466 SD USA
 LIGNOCERIC-ACID 104 SD WOI
 LINOLEIC-ACID 1,168-5,783 SD USA
 WOI
 LINOLEIC-ACID 600-5,871 SH USA
 LINOLENIC-ACID 1,168 SD WOI
 ALPHA-LINOLENIC-ACID 1,390-4,187
 SD USA
 ALPHA-LINOLENIC-ACID 440-4,305 SH
 USA
 LYSINE 1,940-18,069 SD USA
 MAGNESIUM 389-14,400 SD USA USG
 MAGNESIUM 430-4,207 SH USA
 MANGANESE 5.6-240 SD USA USG
 MERCURY 0-0.58 SD JSF55:401
 METHIONINE 420-3,805 SD USA
 MOLYBDENUM 0-8 SD USG
 MUFA 710-2,139 SD USA
 MUFA 220-2,153 SH USA
 MYRISTIC-ACID 20-60 SD USA
 MYRISTIC-ACID 10-98 SH USA
 NIACIN 13-48 SD USA
 NIACIN 11.2-110 SH USA
 NICKEL 0-6 SD USG
 OLEIC-ACID 430-1,295 SD USA
 OLEIC-ACID 130-1,272 SH USA
 PALMITIC-ACID 1,690-5,090 SD USA
 PALMITIC-ACID 530-5,185 SH USA
 PALMITOLEIC-ACID 20-60 SD USA
 PALMITOLEIC-ACID 10-98 SH USA
 PANTOTHENIC-ACID 1.5-18 SD USA
 PHENYLALANINE 1,620-13,330 SD USA
 EFN26:71
 PHENYL-PHOSPHATASE LF WOI
 PHOSPHORUS 520-15,593 SD USA USG
 PHOSPHORUS 90-881 SH USA
 PHOSPHORYLASE SD WOI
 PHYTIC-ACID 5,100-10,270 SD JSF55:401
 POTASSIUM 3,067-43,200 SD USA USG
 POTASSIUM 4,550-44,520 SH USA
 PROLINE 14,050 SD EFN26:71
 PROTEIN 90,000-283,800 SD USA
 JSF55:401
 PROTEIN 41,000-401,174 SH USA
 PUFA 3,380-10,181 SD USA
 PUFA 1,060-10,372 SH USA
 PYROPHOSPHATASE LF WOI
 RAFFINOSE 4,000 SD WOI
 RIBOFLAVIN 1.5-4.5 SD USA
 RIBOFLAVIN 1.8-17 SH USA
 RUBIDIUM 13-39 SD JSF55:401
 SCANDIUM 0.0005-0.005 SD JSF55:401
 SELENIUM 0.014-0.140 SD JSF55:401
 SERINE 12,030 SD EFN26:71
 SFA 2,100-6,325 SD USA
 SFA 660-6,458 SH
 SILVER 0-0.027 SD JSF55:401
 SODIUM 38-200 SD USA
 SODIUM 70-685 SH USA
 STACHYOSE 20,000 SD WOI
 STARCH 390,000-400,000 SD WOI
 STEARIC-ACID 270-813 SD USA
 STEARIC-ACID 80-783 SH USA
 STIGMASTEROL 250 SD WOI
 STRONTIUM 2-60 SD USG
 SUCCINOXIDASE SD SP WOI
 SUCROSE 15,000 SD WOI
 THIAMIN 1.1-10 SD USA
 THIAMIN 3.5-35 SH USA
 THREONINE 1,100-10,165 SD USA
 TIN 0-0.743 SD JSF55:401
 TITANIUM 0.2-84 SD USG
 TRYPTOPHAN 340-3,293 SD USA
 TYROSINE 1,210-8,631 SD USA
 VALINE 1,710-12,731 SD USA
 VANADIUM 0.21-2.4 SD USG
 VERBASCOSIDE 31,000 SD WOI
 VIGNAFURAN PL JSG
 VIT-B6 0.67-4 SD USA

WATER 890,000 LF WOI
 WATER 115,600-668,000 SD USA
 WATER 897,800 SH USA
 YTTRIUM 0.21-2.4 SD USG
 ZINC 10-144 SD USA USG
 ZIRCONIUM 0.8-2.4 SD USG

VINCA MINOR L.

"PERIWINKLE"

ALKALOIDS 1,100-70,600 LF CRC
 ALKALOIDS 12,400-19,800 RT CRC
 L-BORNESITOL PL CRC
 CAOUTCHOUC 11,000 LF CRC
 CAOUTCHOUC 20,000-22,000 PL CRC
 CAROTENE 1,300 LF WOI
 P-COUMARIC-ACID PL HHB
 DAMBONITOL PL HHB
 DEACETYLAQUAMMILINE PL HHB
 1,2-DEHYDROASPIDOSPERMIDINE PL
 ALK
 DELPHINIDIN-3,5-DIGLYCOSIDE PL
 WOI
 DIMETHOXY-EBURNAMONINE PL HHB
 EBURNAMENINE PL ALK
 EBURNAMINE PL ALK
 EBURNAMONINE PL ALK
 EPIPLEIOCARPAMINE-N(4)-OXIDE PL
 JSG
 EPIVINCAMINE PL ALK
 14-EPIVINCAMINE PL ALK
 FRUCTOSE PL HHB
 GENTISINIC-ACID PL HHB
 3-BETA-GLUCOSYLOXY-2-
 HYDROXYBENZOIC-ACID
 L-GLUTAMATE-CARBOXYLASE LF
 CRC
 P-HYDROXYBENZOIC-ACID PL HHB
 20-HYDROXYVINCAMINE PL HHB
 INTYBIN LF WOI
 ISOBURNAMINE PL ALK
 ISOVINCAMINE LF ALK
 KAEMPFEROL-3-
 RHAMNOSYLGALACTOSIDE-7-
 GALACTOSIDE FL HHB
 N(4)-METHOCHLORIDE PL JSG
 10-METHOXY-
 DEACETYLAQUAMMILINE PL HHB
 11-METHOXY-EBURNAMONINE PL
 HHB
 METHOXYMINOVINCINE LF ALK
 16-METHOXYMINOVINCININE PL HHB
 16-METHOXY-20-OXO-1-
 VINCADIFFORMINE LF ALK

11-METHOXYVINCAMINE LF ALK JSG
 N-METHYLASPIDOSPERMINE PL ALK
 N(1)-METHYL-2BETA,16BETA-
 DIHYDROAKUAMMICINE PL JSG
 N-METHYL-QUEBRACHAMINE PL ALK
 HHB
 MINORINE PL ALK
 MINOVINCINE PL JSG
 MINOVINCINE LF ALK
 MINOVINCININE LF ALK
 MINOVINE PL ALK
 MYRICETIN-3-ROBINOBIOSE-7-
 RHAMNOSIDE FL HHB
 ORNOL PL HHB
 PERIVINCINE PL ALK
 PICRININE PL HHB
 PROTOCATECHUIC-ACID PL HHB
 O-PROTOCATECHUIC-ACID PL HHB
 PUBESCEINE PL ALK
 (+)-QUEBRACHAMINE PL ALK HHB
 QUERCETIN-3-RHAMNOGLUCOSIDE-7-
 BETA-GLUCOSIDE PL HHB
 QUERCETIN-3-ROBINOBIOSE-7-
 RHAMNOSIDE LF HHB
 RESERPINE LF ALK
 ROBININ 4,000 FL CRC
 ROBINSIDE 4,000 FL CRC
 SAPONIN PL CRC
 BETA-SITOSTEROL PL HHB
 STRICTAMINE PL ALK
 TANNIN PL CRC
 TRIACONTANE PL HHB
 URSOLIC-ACID 1,400-37,000 LF CRC
 URSOLIC-ACID 2,400-13,400 PL HHB
 VANILLIC-ACID PL HHB
 VINCADIFFORMINE LF ALK
 VINCADINE PL ALK
 VINCAMEDINE PL JSG
 VINCAMIDINE PL ALK
 VINCAMINE 200-1,680 LF ALK CRC
 VINCAMININE PL ALK
 VINCAMINORIDINE PL ALK
 VINCAMINOREINE PL ALK
 VINCAMINORINE LF ALK
 VINCANORINE PL JSG
 VINCAREINE PL JSG
 VINCARORINE PL ALK
 VINCATINE PL HHB
 VINCESINE PL ALK
 VINCINE PL ALK
 VINCININE PL ALK
 VINCORIDINE PL ALK
 VINCORINE PL ALK
 VINCOSIDE 10,000 LF CRC

VINCRIStINE PL JSG
 VININE PL ALK
 VINOMINE PL JSG
 VINOXINE PL ALK
 VINTSINE PL ALK

VIOLA ODORATA L.

“COMMON VIOLET;
 SWEET VIOLET”

BENZYL-ALCOHOL FL GEO
 BENZYL-ALCOHOL LF GEO
 ALDEHYDE 30,000-50,000 FL WOI
 CYANIN 53,000 FL HHB WOI
 DIETHYLPHthalate FL HHB
 D-DIHYDRO-ALPHA-IONONE FL HHB
 D-DIHYDRO-BETA-IONONE FL HHB
 ENANTHIC-ACID LF GEO
 EO 380 RT HHB
 EO 300-1,700 FL GEO HHB
 EO 900-1,200 EO WOI
 EUGENOL 147-357 FL GEO
 EUGENOL LF GEO
 FERULIC-ACID PL JLS58:144
 3-BETA-FRIEDELANOL FL HHB
 FRIEDELIN 160 LF WOI
 GAULTHERIN PL 411/
 HEPTENOL(?) FL GEO
 N-HEPTENOL LF GEO WOI
 N-HEPTYL-ACID
 N-HEXANOL FL GEO
 N-HEXANOL LF GEO
 N-HEXENOL(?) LF GEO
 ALPHA-IONONE FL HHB
 BETA-IONONE FL HHB
 ALPHA-IRONE FL WOI
 BETA-IRONE FL WOI
 ISOBORNEOL FL HHB
 KAEMPFEROL PL JLS58:144
 MALIC-ACID FL HHB
 METHYL-SALICYLATE RT HHB
 MYROSIN SD HHB
 BETA-NITROPROPIONIC-ACID 10-20 RT
 HHB WOI
 2,6-NONADIEN-1-AL LF GEO
 2,6-NONADIEN-1-AL FL GEO
 2,6-NONADIEN-1-OL FL GEO
 2,6-NONADIEN-1-OL LF GEO
 OCTADIENOL(?) FL GEO
 OCTENOIC-ACID(?) LF GEO
 N-2-OCTEN-1-OL(?) LF GEO
 N-OCTENOL(?) LF GEO
 OCTYLIC-ACID LF HHB
 ODORATINE 14,100 RT HHB WOI

PALMITIC-ACID LF GEO
 PARMONE FL GEO
 PIPERONAL FL HHB
 PROPIONIC-ACID LF GEO
 QUERCETIN PL HHB
 RUTIN 20,000 FL WOI
 SALICYLIC-ACID LF GEO
 SALICYLIC-ACID-METHYL-ESTER
 RT HHB
 SAPONINS 1,000-25,000 RT
 SCOPOLETIN? PL JLS58:144
 SINAPIC-ACID PL JLS58:144
 BETA-SITOSTEROL 330 PL HHB WOI
 TRIACETOAMINE RT WOI
 UNDECANONE-2 FL HHB
 VANILLIN FL HHB
 VIOLAQUERCITRIN FL HHB
 VIOLARUTIN 20,000 FL HHB
 VIOLIN RT HHB
 VIOLIN FL HHB
 VIOLUTOSIDE PL HHB
 L-ZINGIBERENE FL HHB

VIOLA TRICOLOR L.

“WILD VIOLET; PANSY”

ARABINOSE PL WOI
 AUROXANTHIN FL HHB
 P-COUMARIC-ACID PL HHB
 DELPHINIDIN-TRIGLYCOSIDE PL HHB
 EO 86 PL WOI
 FLAVONXANTHIN FL HHB
 GALACTOSE PL WOI
 GALACTURONIC-ACID PL HHB
 GAULTHERIN PL HHB
 D-GLUCOSE PL HHB
 ISOORIENTIN PL HHB
 MAGNESIUM-TARTRATE PL WOI
 METHYL-SALICYLATE TR PL 411/
 MUCILAGE 95,000 PL WOI
 MYRICETIN FL HHB
 MYROSINE FL WOI
 MYRTILLIN-A
 ORIENTIN PL HHB
 PAEONIDIN PL HHB
 QUERCETIN FL WOI
 L-RHAMNOSE PL HHB
 RUTIN 100,000-230,000 FL HHB 1/ WOI
 SALICYLIC-ACID FL WOI
 SALICYLIC-ACID-METHYL-ESTER
 PL WOI
 SAPONARETIN PL HHB
 SAPONARINE PL HHB
 SAPONIN PL HHB

SCOPARINE PL HHB
 TANNIN PL WOI
 TOCOPHEROL 302 FL WOI
 VICENIN-2 PL HHB
 VIOLA-EMETINE PL HHB
 VIOLANINE 330,000 FL HHB (SIC)
 VIOLANTHIN 700 FL WOI
 VIOLAQUERCITRIN PL 411/
 VIOLAXANTHIN 500-700 FL HHB
 15-CIS-VIOLAXANTHIN FL CCO
 VIOLEOXANTHIN PL HHB
 VIOLIN 30 PL WOI
 VIOLUTOSIDE PL HHB
 VITEXIN-MONO-C-GLUCOSIDE PL HHB
 XYLOSE PL WOI
 ZEAXANTHIN FL HHB

1/HHB says 23% Viola-Quercitrin (Rutin); I
 find that hard to believe.

VIOLA CALOPHYLLA WARB.

“PARICA”

N,N-DIMETHYLTRYPTAMINE BK CRC
 5-METHOXY-N,N-
 DIMETHYLTRYPTAMINE
 BK CRC
 N-MONOMETHYLTRYPTAMINE BK
 CRC

VISCUM ALBUM L.

“EUROPEAN MISTLETOE”

ACETYLCHOLINE PL WOI
 ALUMINUM 283 LF PED
 GAMMA-AMINO-BUTYRIC-ACID PL
 WOI
 BETA-AMYRIN RE WOI
 ARGININE JU CRC
 ASCORBIC-ACID 7,500 FR WOI
 ASORBIC-ACID 750 LF WOI
 ASH 54,000 LF PED
 ASPARAGINE JU CRC
 AVICULARIN TW CCO
 CAFFEIC-ACID PL HHB
 CALCIUM 8,910 LF PED
 ALPHA-CAROTENE LF WOI
 BETA-CAROTENE LF WOI
 CERYL-ALCOHOL RE WOI
 CHROMIUM 19 LF PED
 COBALT 92 LF PED
 CYSTEIC-ACID JU CRC
 4,5-DIHYDROXY-3,7-
 DIMETHOXYFLAVONE TW CCO

ELEUTHEROSIDE-E? PL JSG
 FAT 23,000 LF PED
 FLAVOYADORININE-A PL HHB
 FLAVORADORININE-B PL HHB
 GENTISIC-ACID SH 411/
 GLUCOSE PL HHB
 GUAIACYL-SYRINGYL-LIGNIN PL HHB
 HISTAMINE PL WOI
 HOMOFLAVOYADORONINE-B PL HHB
 HYDROXYLYSINE JU CRC
 INOSITOL 4,000 FR HHB
 IRON 460 LF PED
 LUPEOL RE WOI
 LUTEIN LF WOI
 MAGNESIUM 3,110 LF PED
 MANGANESE 159 LF PED
 OLEANOLIC-ACID RE WOI
 MANNITOL PL HHB
 MESOINOSITOL 12,000 FR HHB
 EPSILON-N-METHYL-LYSINE PL
 HHB
 MYRISTIC-ACID PL HHB
 PALMITIC-ACID FR HHB
 PHENETHYLAMINE PL WOI
 PHOSPHORUS 2,400 LF PED
 POTASSIUM 12,200 LF PED
 PROTEIN 119,000 LF PED
 QUERCETIN-3-ARABINOSIDE PL
 HHB
 QUERCETIN-3-RHAMNOSIDE PL
 HHB
 QUERCITOL PL HHB
 RESIN PL WOI
 RHAMNOSE PL HHB
 SELENIUM 14 LF PED
 SILICON TR LF PED
 SINAPIC-ACID PL HHB
 SODIUM 49 LF PED
 STARCH ST WOI
 SYRINAGRESINOL SH 411/
 SYRINGARESINOL-MONO-O-GLU-
 COSIDE PL JSG
 SYRINGENIN-4'-APIOSYL-GLUCOSIDE
 PL JSG
 SYRINGENIN-4'-O-GLUCOSIDE PL JSG
 SYRINGIN PL WOI
 TIN 18 LF PED
 TYRAMINE PL WOI
 VISCIC-ACID SG 411/
 VISCIN PL WOI
 VISCOTOXIN PL WOI
 WATER 798,000 LF PED
 XANTHOPHYLL PL WOI
 ZINC 86 LF PED

VITEX AGNUS-CASTUS L.

"CHASTE TREE"

AGNUSIDE LF HHB
 AUCUBIN LF HHB
 CASTICINE SD HHB
 CINEOLE FR HHB
 EO 4,700 FR HHB
 HOMOOREINTIN LF HHB
 LUTEOLIN-7-GLUCOSIDE LF HHB
 PINENE FR HHB

VITIS VINIFERA L.

"GRAPE"

ABSCISSIC-ACID FR HHB
 ACETIC-ACID 1,500-2,000 FR HHB
 ACETIC-ACID LF HHB
 ACUMINOSIDE FR JU NAP
 ALANINE 280-1,440 FR USA
 ALUMINUM 1-154 FR AAS USG
 ALUMINUM 1,030 ST PED
 ALPHA-AMYL-AMINE FR JU NAP
 ALPHA-AMYRIN ST NAP
 BETA-AMYRIN ST NAP
 ANTERAXANTHIN FR NAP
 ANTHOCYANINS FR NAP
 ARGININE 490-2,520 FR USA
 ARSENIC 0.0011-0.889 FR AAS USG
 ASCORBIC-ACID 99-600 FR USA
 ASCORBIC-ACID 3,490-3,870 LF WOI
 ASCORBIC-ACID 310 ST PED
 ASCORBIC-ACID-OXIDASE FR WOI
 ASH 4,290-77,000 FR USG USA
 ASH 88,000 ST PED
 ASPARTIC-ACID 810-4,167 FR USA
 ASRAGALIN FL NAP
 BARIUM 0.66-15.4 FR USG
 BENZOIC-ACID FR HHB
 BENZYL-ALCOHOL LF NAP
 BENZYL-ALCOHOL-6-O-L-
 ARABINOFURANOSYL-BETA-D-
 GLUCOPYRANOSIDE LF NAP
 BENZYL-ALCOHOL-BETA-D-GLU-
 COSIDE LF NAP
 BENZYL-ALCOHOL-BETA-D-
 RUTINOSIDE LF NAP
 BENZYL-6-O-BETA-D-
 APIOFURANOSYL-BETA-D-GLU-
 COSIDE FR JU NAP
 BETAINE FR JU NAP
 BETULINIC-ACID RT NAP
 BIOTIN FR HHB

BORON 1-50 FR AAS BOB USG
 BREVILAGIN-I 533 LF NAP
 BROMINE <1 FR USA
 CADMIUM 0.001-0.231 FR AAS USG
 CAFFEIC-ACID FR HHB
 CIS-CAFFEIC-ACID FR CRC(FNS)
 TRANS-CAFFEIC-ACID FR CRC(FNS)
 CAFFEYOYL-TARTRATE FR CRC(FNS)
 CAFFEYLTARTARIC-ACID FR
 CRC(FNS)
 CALCIUM 92-4,774 FR AAS USG USA
 CALCIUM 17,700 ST PED
 CALCIUM-PECTATE 69,000 LF WOI
 CARBOHYDRATES 177,700-914,095 FR
 USA
 ALPHA-CAROTENE FR NAP
 BETA-CAROTENE 0.5-2.1 FR USA WOI
 BETA-CAROTENE 43 ST PED
 GAMMA-CAROTENE FR NAP
 CATALASE FR WOI
 D-CATECHIN LF HHB
 D-CATECHIN FR HHB
 CATECHOL-OXIDASE FR WOI
 CHLOROGENIC-ACID FR CRC(FNS)
 CHOLESTEROL FR NAP
 CINNAMIC-ACID FR HHB
 CHLOROGENIC-ACID FR HHB
 CHROMIUM 0.005-0.385 FR AAS USG
 CHROMIUM 9 ST PED
 CITRIC-ACID LF HHB
 CITRIC-ACID FR HHB
 CITRONELLOL LF NAP
 CITROSTADIENOL ST NAP
 COBALT <0.005-0.22 FR AAS USG
 COBALT 33 ST PED
 COPPER 0.7-11.6 FR AAS USG USA
 P-COUMARIC-ACID FR HHB
 COUMARIN FR HHB
 P-COUMAROYL-CIS-TARTRATE FR
 NAP
 P-COUMAROYL-TRANS-TARTRATE FR
 NAP
 CRYPTOCHLOROGENIC-ACID FR
 CRC(FNS)
 CRYPTOXANTHIN FR NAP
 CYANIDIN FR NAP
 CYANIDIN-3-GALACTOSIDE FR NAP
 CYANIDIN-3-GLUCOSIDE FR HHB
 CYCLOARTENOL ST NAP
 CYSTINE 110-566 FR USA
 DAMASCENONE 0.013-0.085 FR JU NAP
 DELPHINIDIN PL JLS58:140
 DELPHINIDIN-3-CAFFEYOYLGLUCOSIDE
 FR HHB

- DELPHINIDIN-3-(P-COUMAROYLGLUCOSIDE)-5-GLUCOSIDE FR HHB
 DELPHINIDIN-3-(6-P-COUMAROYLGLUCOSIDE) FR HHB
 DELPHINIDIN-3,5-DIGLUCOSIDE FR HHB
 DELPHINIDIN-3-BETA-D-GLUCOSIDE FR HHB NAP
 DIETHYL-AMINE FR JU NAP
 DIMETHYL-AMINE FR JU NAP
 DIHYDROFURAN-I FR JU NAP
 DIHYDROPHASEIC-ACID-4'-BETA-D-GLUCOSIDE FR NAP
 3,7-DIMETHYL-OCT-1-ENE-3,7-DIOL FR NAP
 3,7-DIMETHYL-OCT-1-ENE-3,6,7-TRIOL FR NAP
 3,7-DIMETHYL-OCTA-1,5-DIEN-3,7-DIOL FR NAP
 3,7-DIMETHYL-OCTA-1,6-DIEN-3,5-DIOL FR NAP
 3,7-DIMETHYL-OCTA-1,7-DIEN-3,6-DIOL FR NAP
 2,6-DIMETHYL-TRANS-OCTA-2,7-DIEN-1,6-DIOL-6-O-ALPHA-D-ARABINOFURANOSYL-BETA-D-BETA-D-GLUCOPYRANOSIDE FR NAP
 2,6-DIMETHYL-TRANS-OCTA-2,7-DIEN-1,6-DIOL-BETA-D-GLUCOPYRANOSIDE FR NAP
 2,6-DIMETHYL-TRANS,TRANS-OCTA-2,6-DIEN-1,8-DIOL FR NAP
 3,7-DIMETHYL-OCTA-1,5,7-TRIEN-3-OL FR NAP
 ELEMOL-ACETATE 130,200 EO(LF) NAP
 ELLAGIC-ACID FR NAP
 ENOMELANIN FR NAP
 ENOTANNIN SD NAP
 (-)-EPICATECHIN FR HHB
 (-)-EPICATECHIN-3-GALLATE SD NAP
 EPICATECHIN-3-GALLATE FR NAP
 ERGOSTEROL FR NAP
 ETHYL-AMINE FR JU NAP
 FAT 5,010-33,898 FR USA
 FAT 60,000-200,000 SD WOI
 FERULIC-ACID FR HHB
 FIBER 4,210-24,640 FR USA
 FLAVONOIDS 40,000-50,000 LF HHB
 FLUORINE 0.1-0.6 FR AAS
 FOLACIN 0.03-0.23 FR USA
 FORMIC-ACID FR HHB
 FRUCTOSE FR WOI
 FUMARIC-ACID LF HHB
 GABA FR HHB
 GALACTOSE FR WOI
 GALACTURONIC-ACID FR WOI
 GALLIC-ACID FR HHB
 GALLOCATECHIN HR HHB
 (-)-GALLOCATECHIN LF HHB
 (DL)-GALLOCATECHIN LF NAP
 GENTISIC-ACID HU HHB
 GERANIOL 145,200 EO(LF) NAP
 GERANIOL FR WOI
 GERANIOL-6-O-ALPHA-L-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE FR JU NAP
 GERANIOL-BETA-D-GLUCOSIDE FR JU NAP
 GERANIOL-6-O-ALPHA-L-RHAMNOPYRANOSYL-BETA-D-GLUCOPYRANOSIDE FR JU NAP
 GERMANICOL ST NAP
 GLUCOSE FR WOI
 GLUCOSE-6-PHOSPHATE-DEHYDROGENASE FR WOI
 GLUTAMIC-ACID 1,380-7,099 FR USA
 GLYCERIC-ACID LF HHB
 GLYCINE 200-1,029 FR USA
 A-HEMICELLULOSE FR WOI
 B-HEMICELLULOSE FR WOI
 HENTRIACONTANE FR WOI
 HEPTACOSAN-1-OL RT NAP
 HEXOKINASE FR WOI
 HIRSUTRIN LF NAP
 HISTIDINE 240-1,235 FR USA
 O-HYDROXYBENZOIC-ACID HU HHB
 P-HYDROXYBENZOIC-ACID HU HHB
 ALPHA-HYDROXY-CAROTENE FR NAP
 HYDROXY-CITRONELLOL EO NAP
 3-HYDROXY-BETA-DAMASCONE FR JU NAP
 9-HYDROXY-MEGASTIGM-4,6,7-TRIEN-3-ONE FR JU NAP
 INOSITOL LF HHB
 BETA-IONONE FR WOI
 IRON 1.5-154 FR AAS USG USA
 IRON 900 ST
 ISOAMYL-AMINE FR JU NAP
 ISOBUTYL-AMINE FR JU NAP
 ISOCHLOROGENIC-ACID FR HHB
 ISOLEUCINE 50-257 FR USA
 ISOQUERCITRIN LF HHB
 ISOVITILAGIN 163 LF NAP
 KAEMPFEROL LF HHB
 KAEMPFEROL-3-MONOGLUCOSIDE FR HHB
 LACTIC-ACID FR HHB

LEAD 0.02-9 FR AAS USG
 LEUCINE 140-720 FR USA
 LEUCOANTHOCYANIDOLE FR HHB
 LEUCOCYANIDIN
 LIMONENE PL PAS
 LINALOOL FR WOI
 LINALOOL 273,000 EO(LF) NAP
 LINALOOL-6-O-BETA-D-
 APIOFURANOSYL-BETA-D-GLU-
 COSIDE FR JU NAP
 LINALOOL-6-O-ALPHA-L-
 ARABINOFURANOSYL-BETA-D-
 GLUCOPYRANOSIDE FR JU NAP
 LINALOOL-BETA-D-GLUCOSIDE FR JU
 NAP
 LINALOOL-6-O-ALPHA-L-
 RHAMNOPYRANOSYL-BETA-D-
 GLUCOPYRANOSIDE FR JU NAP
 LINOLEIC-ACID 1,300-6,687 FR USA
 LINOLEIC-ACID 33,000-110,000 SD WOI
 ALPHA-LINOLENIC-ACID 390-2,006 FR
 USA
 LITHIUM 0.088-0.308 FR USG
 LUPEOL LF NAP
 LUTEIN 0.7-7 FR JAF37:657
 LUTEIN-5-6-EPOXIDE FR NAP
 LUTEIN-5-8-EPOXIDE FR NAP
 LUTEOLIN LF HHB
 LUTEOXANTHIN FR NAP
 LYCOPENE FR NAP
 LYSINE 150-772 FR USA
 MAGNESIUM 58-2,310 FR USG USA
 MAGNESIUM 4,360 ST PED
 MALIC-ACID PL HHB
 MALIC-ACID 1,500-2,000 FR HHB
 MALVIDIN FR NAP
 MALVIDIN-3-CAFFEYOYLGLUCOSIDE
 FR HHB
 MALVIDIN-3-CHLOROGENIC-ACID-
 GLUCOSIDE
 FR HHB
 MALVIDIN-3-(P-
 COUMAROYLGLUCOSIDE) FR HHB
 MALVIDIN-3-(6-P-
 COUMAROYLGLUCOSIDE)-5-
 GLUCOSIDE FR HHB
 MALVIDIN-3-GLUCOSIDE FR HHB
 MALVIDIN-3-O-BETA-D-GLUCOSIDE
 FR HHB
 MANGANESE 0.5-54 FR USG USA
 MANGANESE 986 ST PE
 MEGASTIGM-5-EN-7-YNE-3,9-DIOL FR
 JU NAP
 MELIBIOSE FR WOI
 MERCURY 0.00022-0.011 FR AAS USG
 METHIONINE 220-1,132 FR USA
 2-METHOXY-3-ISOBUTYL-PYRAZINE
 ST NAP
 24-METHYL-CYCLOARTENOL ST NAP
 MOLYBDENUM <0.1-0.539 FR AAS USG
 MONOCAFFEIC-ACID LF FR HHB
 MONO-P-COUMARYL-ACID LF FR HHB
 MONOFERULYLSUCCINIC-ACID LF
 HHB
 MUFA 230-1,183 FR USA
 MUTATOXANTHIN FR NAP
 MYRICETIN FR NAP
 MYRICETIN-3-MONOGLUCOSIDE FR
 HHB
 MYRISTIC-ACID 50-257 FR USA
 NEOCHLOROGENIC-ACID FR HHB
 NEOXANTHIN FR NAP
 NEROL LF NAP
 NEROL-6-O-BETA-D-APIOFURANOSYL-
 BETA-D-GLUCOSIDE FR JU NAP
 NEROL-6-O-ALPHA-L-
 ARABINOFURANOSYL-BETA-D-
 GLUCOPYRANOSIDE FR JU NAP
 NEROL-BETA-D-GLUCOSIDE FR JU NAP
 NEROL-6-O-ALPHA-L-
 RHAMNOPYRANOSYL-BETA-D-
 GLUCOPYRANOSIDE FR JU NAP
 NIACIN 3-15.4 FR USA
 NIACIN TR ST PED
 NICKEL 0.01-0.77 FR AAS USG
 NITROGEN 1,100-7,220 FR AAS
 NONACOSANE FR WOI
 30-NOR-LUPAN-3-BETA-OL-20-ONE RT
 NAP
 OBTUSIFOLIOL ST NAP
 OCTAN-1-OL ST NAP
 OENIN FR HU CCO
 OLEANOLIC-ACID LF WX HHB
 OLEANOLIC-ACID-METHYL-ESTER LF
 NAP
 OLEANOLIC-ALDEHYDE ST NAP
 OLEIC-ACID 230-1,183
 OLEIC-ACID 22,200-74,000 SD WOI
 OXALIC-ACID 34 FR WBB
 ALPHA-3-OXO-DAMASCONE FR JU
 NAP
 BETA-3-OXO-DAMASCONE FR JU NAP
 ALPHA-3-OXO-IONONE FR JU NAP
 PAEONIDIN FR NAP
 PAEONIDIN-3-CAFFEYOYLGLUCOSIDE
 FR HHB
 PAEONIDIN-3-(6-P-
 COUMAROYLGLUCOSIDE) FR HHB

- PAEONIDIN-3-5,-DIGLUCOSIDE FR HHB
 PAEONIDIN-3-O-BETA-D-GLUCOSIDE FR HHB
 PALMITIC-ACID 1,620-8,333 FR USA
 PALMITIC-ACID 3,300-11,000 SD WOI
 PANTOTHENIC-ACID 0.2-1.3 FR USA
 PECTIN 300-3,900 FR HHB WOI
 PECTIN-METHYL-ESTERASE FR HHB
 PELARGONIDIN FR NAP
 PEROXIDASE FR WOI
 PETUNIDIN-3-CAFFEYOYLGLUCOSIDE
 PETUNIDIN-3-(6-P-COUMAROYLGLUCOSIDE) FR HHB
 PETUNIDIN-3,5-DIGLUCOSIDE FR HHB
 PETUNIDIN-3-GLUCOSIDE FR HHB
 PETUNIDIN-3-O-BETA-D-GLUCOSIDE FR HHB
 PHENYLALANINE 140-720 FR USA
 2-PHENYLETHAN-1-OL LF NAP
 2-PHENYLETHAN-2-OL-6-BETA-D-APIOFURANOSYL-BETA-D-GLUCOSIDE FR JU NAP
 BETA-PHENYLETHANOL-6-BETA-D-ARABINOFURANOSYL-BETA-D-GLUCOPYRANOSIDE FR JU NAP
 BETA-PHENYLETHANOL-BETA-D-GLUCOSIDE FR JU NAP
 BETA-PHENYLETHANOL-BETA-D-RUTNOSIDE FR JU NAP
 2-PHENYLETHYL-AMINE FR JU NAP
 PHOSPHODIESTERASE RT NAP
 PHOSPHORUS 117-1,848 FR USG USA
 PHOSPHORUS 1,710 ST PED
 PHYTOENE FR NAP
 PHYTOFLUENE FR NAP
 PHYTOSTEROLS 40-206 FR US
 POLYPHENOL-OXIDASE FR WOI
 POTASSIUM 1,784-24,640 FR USG USA
 POTASSIUM 20,100 ST PED
 PROCYANIDINS FR NAP
 PROCYANIDIN-B-2-3'-O-GALLATE FR NAP
 PROLINE 220-1,132 FR USA
 N-PROPYL-AMINE FR JU NAP
 PROTEIN 6,350-35,236 FR USA
 PROTEIN 70,000-100,000 SD WOI
 PROTEIN 89,000 ST PED
 PROTOPECTINASE FR WOI
 PTEROSTILBENE LF NAP
 PUFA 1,690-8,693 FR USA
 PYROPHOSPHATASE-NUCLOETIDE RT NAP
 PYRROLIDINE FR JU NAP
 QUERCETIN FR NAP
 QUERCETIN-GLUCURONOSIDE FR WOI
 QUERCITRIN LF HHB
 QUINIC-ACID LF HHB
 QUINIC-ACID FR CRC(FNS)
 RAFFINOSE FR WOI
 RESVERATROL 90,400 LF CCO NAP
 RIBOFLAVIN 0.5-3.2
 RIBOFLAVIN 6.9 ST PED
 ROSEOSIDE FR NAP
 RUBIDIUM 0.4-5.5 FR AAS
 RUTIN LF NAP
 SALICYLIC-ACID RT NAP
 SELENIUM 0.0001-0.012 FR AAS USG
 SELENIUM 18 ST PED
 SERINE 320-1,646 FR USA
 SFA 1,890-9,722 FR USA
 SHIKIMIC-ACID LH HHB
 SILICON 1-28 FR AAS
 SILICON 365 ST PED
 SILVER 0.022-0.077 FR USG
 SINAPIC-ACID RT NAP
 BETA-SITOSTEROL FR WOI
 SODIUM 2-454 FR USG
 SODIUM 156 ST PED
 SQUALENE SD NAP
 STACHYOSE FR WOI
 STEARIC-ACID 1,440-4,800 SD WOI
 STIGMASTEROL PL PAS
 STRONTIUM 1.54-38.5 FR USG
 SUCCINDEHYDROGENASE FR WOI
 SUCCINIC-ACID FR WOI
 SUGAR 30,000-189,000 FR HHB WOI
 SULFUR 7-888 FR AAS USG
 SYRINGIC-ACID HU HHB
 TANNIN SD NAP
 TARAXASTEROL LF NAP
 TARAXEROL LF NAP
 TARTARIC-ACID 15-20 FR WOI
 TARTARIC-ACID-CAFFEYOYL-ESTER 15-20 FR NAP
 ALPHA-TERPINEOL 108,000 EO(LF) NAP
 THIAMIN 0.8-4.9 FR USA
 THIAMIN 11 ST PED
 THREONINE 180-926 FR USA
 TIN 12 ST PED
 TITANIUM 0.11-7.7 FR USG
 ALPHA-TOCOPHEROL 6-31 FR TOT
 TRIACONTAN-1-OL RT NAP
 TRIACONTAN-1-OL-TRIDECANOATE RT NAP

2,2,6-TRIMETHYL-8-(1-HYDROXY-ETHYL)-7-OXA-BICYCLO (4,3,0)-NONA-4,9-DIENE FR NAP TRYPTOPHAN 30-154 FR USA

TYROSINE 120-617 FR USA

URSOLIC-ALDEHYDE ST NAP

VALINE 180-926 FR USA

VANILLIC-ACID HU HHB

ALPHA-VINIFERIN 23,400 LF NAP

EPSILON-VINIFERIN 30,900 LF NAP

VIOLAXANTHIN FR NAP

VIT-B6 1-6 FR USA

VITILAGIN 89 LF NAP

VITISPIRANE PL CCO

VOMIFOLIOL FR NAP

WATER 761,000-897,000 FR USG

WATER 792,000 ST PED

XYLOSE FR HHB

ZEAXANTHIN FR NAP

ZINC 0.4-27 FR USG USA

ZINC 75 ST PED

ZIRCONIUM 0.44-1.54 FR USG

AAS=ACTA AGRIC SCAND SUPPL

22:1980; H2O=82%; ZMB=5.56 X APB

WARBURGHIA UGANDENSIS SPRAGUE

"WARBURGHIA"

EPIPOLYGODIAL BK ABC48:73

MANNITOL 30,000 BK WBB

MUZIGADIAL BK ABC48:73

POLYGODIAL BK ABC48:73

TANNIN BK WBB

UGANDENSIDIAL PL JSG

UGANDENSOLIDE PL JSG

WARBURGANAL BK ABC48:73

WEDELIA TRILOBATA HITCHC.

"GOLDCUP"

"PASMO"

6-ANGELOYLOXYTRILOBOLIDE PL JSG

3ALPHA-ANGELOYLOXYKAUR-16-EN-19-OIC-ACID-METHYL-ESTER PL JSG

15-ANGELOYLOXYKAUR-16-EN-19-OIC-ACID-METHYL-ESTER PL JSG

3ALPHA-CINNAMOYLOXYKAUR-16-EN-19-OIC-ACID-METHYL-ESTER PL JSG

6-METHYL-PROPANOYLTRILOBOLIDE PL JSG

SIMSOLIDE PL JSG

3ALPHA-TIGLOYLOXYKAUR-16-EN-19-OIC-ACID-METHYL-ESTER PL JSG
WEDELIASECOKAURENOLIDE PL JSG

WITHANIA SOMNIFERUM (L.) SCHOTT

"ASHWAGANDHA"

ALKALOIDS 900 LF WOI

ALKALOIDS 1,300-43,00 RT WOI

ANAFERINE RT WOI

ANAHYGRINE RT WOI

CHAMASE FR WOI

CHLOROGENIC-ACID LF WOI

CHOLINE RT HHB

CUSCOHYGRINE RT WOI

CYSTEINE FR WOI

CYSTINE FR WOI

5,20ALPHA-(R)-DIHYROXY-

6ALPHA,7ALPHA-EPOXY-1-OXO-

(5ALPHA)-WITHA-2,24-DIENOLIDE

5ALPHA,17ALPHA-(R)-DIHYROXY-

6ALPHA,7ALPHA-EPOXY-WITHA-2,24-

DIENOLIDE

DULCITOL RT WOI

5,6-EPOXY-4,17-DIHYDROXY-1-OXO-

2,24-WITHADIENOLIDE PL JSG

6,7-EPOXY-5,27-DIHYDROXY-1-OXO-

2,24-WITHADIENOLIDE PL JSG

5,6-EPOXY-4,20-DIHYDROXY-1-OXO-2-

WITHENOLIDE PL JSG

5,6-EPOXY-4,20-DIHYDROXY-1-OXO-24-

WITHENOLIDE PL JSG

5,6-EPOXY-20-HYDROXY-1,4-DIOXO-

2,24-WITHADIENOLIDE PL JSG

5,6-EPOXY-20-HYDROXY-1,4-DIOXO-2-

WITHENOLIDE PL JSG

HENTRIACONTANE RT WOI

HYDROXYPROLINE FR WOI

14-HYDROXYWITHANOLIDE-D PL JSG

17-HYDROXYWITHANOLIDE-D PL JSG

27-HYDROXYWITHANOLIDE-D PL JSG

IPURANOL RT HHB

ISOPELLETIERINE RT WOI

24-METHYLCHOLESTA-5,24-DIEN-

3BETA-OL PL JSG

NICOTINE? RT WOI

PSEUDOTROPINE RT WOI

PSEUDOWITHANINE PL JSG

SCOPOLETIN PL WOI

BETA-SITOSTEROL 200 RT HHB

SOMNIFERIANINE PL JSG

SOMNIFERININE PL ALK
 SOMNIFERINE RT HHB
 SOMNINE PL ALK
 SOMNISOL PL CRC
 SOMNITOL PL CRC
 5,24-STIGMASTADIEN-3-OL PL JSG
 3ALPHA-TIGLOYOXYTROPANE RT HHB
 1,3,20-TRIHYDROXY-5,24-WITHADIENOLIDE PL JSG
 14,20R,27-TRIHYDROXY-1-OXO-3,5,24-WITHATRIENOLIDE PL JSG
 TROPINE RT WOI
 3-TROPYLTIGLOATE RT WOI
 STARCH RT WOI
 SUCROSE 1,000 RT HHB
 VISAMINE RT WOI
 WITHAFERIN-A 1,800-8,600 LF WOI
 WITHAFERINE LF HHB
 WITHAFERINS LF WOI
 WITHANIC-ACID PL CRC
 WITHANANINE RT HHB
 ALPHA-WITHANANINE PL JSG
 WITHANINE RT HHB
 WITHANIOL 800 RT WOI
 WITHANOLIDE-D 3,000 LF HHB
 WITHANOLIDE-G LF HHB
 WITHANOLIDE-N LF HHB
 WITHANOLIDE-O LF HHB
 WITHASOMINE RT WOI

XANTHOSOMA SAGITTIFOLIUM
 (L.) SCHOTT

“MALANGA”
 “TANNIA”
 “YAUTIA”

ALUMINUM 5.3-16.6 RT B&H
 ASCORBIC ACID 370-4,040 LF B&H CRC
 ASCORBIC ACID 50-960 RT B&H
 ASH 13,000-129,000 LF B&H CRC
 ASH 6,000-146,000 RT B&H CRC
 BORON 0.9-6.5 RT B&H JFS51:523
 CALCIUM 950-17,800 LF B&H CRC
 CALCIUM 59-4,000 RT B&H CRC
 JSF53:491
 CALCIUM-OXALATE 230-720 RT B&H
 CARBOHYDRATES 53,000-553,000 LF CRC
 CARBOHYDRATES 17,000-976,000 RT B&H CRC
 BETA-CAROTENE 33-327 LF B&H CRC
 BETA-CAROTENE 0-0.6 RT B&H CRC

COPPER 1.9-14 RT B&H JSF53:491
 FAT 16,600-103,100 LF B&H CRC
 FAT 1,000-9,000 RT B&H CRC
 FIBER 21,000-208,000 LF B&H CRC
 FIBER 6,000-28,000 RT B&H CRC
 IRON 20-365 LF B&H CRC
 IRON 3-27 RT B&H CRC JSF53:491
 KILOCALORIES 34-3,370 LF B&H CRC
 KILOCALORIES 1,320-3,870 RT B&H CRC
 MAGNESIUM 510-3,170 LF B&H
 MAGNESIUM 270-2,100 RT B&H
 JSF53:491
 MANGANESE 1.7-11.3 RT B&H
 JSF53:491
 NIACIN 7-20 RT CRC
 OXALATE 6,800-42,235 LF B&H
 OXALATE 600-18,810 RT B&H
 PHOSPHORUS 610-38,416 LF B&H CRC
 PHOSPHORUS 470-4,700 RT B&H CRC
 JSF53:491
 POTASSIUM 4,480-39,100 RT B&H
 JSF53:491
 PROTEIN 25,000-248,000 LF B&H CRC
 PROTEIN 5,000-62,000 RT B&H CRC
 RIBOFLAVIN 0.3-0.9 RT CRC
 SODIUM 87-540 LF B&H
 SODIUM 38-400 RT B&H JSF53:491
 JFS51:523
 STARCH 257,000-805,640 RT B&H
 SUGARS 2,700-17,870 RT B&H
 SULFUR 79-580 RT B&H JFS51:523
 THIAMIN 1.3-3.8 RT CRC
 WATER 839,000 LF B&H
 WATER 150,000-770,000 RT B&H CRC
 ZINC 5-19 RT B&H JSF53:491

***YUCCA BACCATA* TORR.**

“YUCCA”
 “SPANISH BAYONET”

ALUMINUM 51 RT PED 1/
 ASCORBIC-ACID 131 RT PED
 ASH 65,000 RT PED
 CALCIUM 8,260 RT PED
 BETA-CAROTENE TR RT PED
 CHROMIUM 0.7 RT PED
 COBALT 12 RT PED
 EO 1,000-2,000 RT PED
 FAT 23,000 RT PED
 FAT 272,000 SD CRC
 FIBER 112,000 RT PED
 IRON 73 RT PED

KILOCALORIES 2,820 RT PED
 MAGNESIUM 510 RT PED
 MANGANESE 6 RT PED
 NIACIN 0 RT PED
 PHOSPHORUS 810 RT PED
 POTASSIUM 160 RT PED
 PROTEIN 94,000 RT PED
 PROTEIN 144,000 SD CRC
 RIBOFLAVIN 7 BK PED
 SARSAPOGENIN RT PED
 SELENIUM 9 RT PED
 SILICON 12 RT PED
 SODIUM 110 RT PED
 TANNIN RT PED
 THIAMIN 2.4 RT PED
 TIGOGENIN RT PED
 TIN 8 RT PED
 WATER 792,000 RT PED
 ZINC 14 RT PED

YUCCA BREVIFOLIA ENGELM.

“JOSHUA TREE”

KAMMOGENIN PL JSG
 SAPONINS PL AYL
 SARSAPOGENIN PL JSG
 SMILAGENIN PL JSG
 TIGOGENIN PL AYL

YUCCA SCHIDIGERA ROEHL.

“MOHAVE YUCCA”

GITOGENIN PL ABS
 MARCOGENIN PL ABS
 NEOGITOGENIN PL ABS
 SAMOGENIN PL ABS
 SAPONIN PL AYL
 SARSAPOGENIN PL AYL
 SMILAGENIN PL ABS

ZANTHOXYLUM AMERICANUM
 MILL.

“PRICKLY ASH”

ALLOXANTHOXYLETIN BK 411/
 BERBERINE
 CANDICINE
 CHELERYTHRINE BK 411/
 8-(3,3-DIMETHYLALLYL)
 ALLOXANTHOXYLETIN
 BETA-FAGARINE BK 411/
 GAMMA-FAGARINE
 HERCLAVINE

LAURIFOLINE BK 411/
 MAGNOFLORINE BK 411/
 O-METHYLTYRAMINE-N-METHYL-
 CINNAMIDE
 NITIDINE BK 411/
 RESIN
 SKIMMIANINE BL 411/
 TAMBETARINE BK 411/
 TANNIN
 TEMBETARINE
 XANTHYLETIN BK 411/
 XANTHOXYLETIN BK 411/
 XANTHOXYLIN

ZEA MAYS L.

“CORN”

ABSCISIC-ACID FL NAP
 ABSCISSIN-II SD
 ACETOIN
 1-ACETO-NAPHTHONE 13,000 STOM NAP
 2-ACETO-NAPHTHONE 27,000 STOM NAP
 1-ACETO-METHYL-NAPHTHONE 1,000
 STOM NAP
 ACONITIC-ACID RT NAP
 ADENINE SD NAP
 ADENOSINE SD NAP
 ALANINE 2,950-12,272 SD USA
 ALDOBIOURONIC-ACID
 ALLANTOIN SD 411/
 ALUMINUM 1-275 SD USG
 ALUMINUM 213 SI PED 6/
 AMINO-ADIPIC-ACID
 1-(3-AMINO-PROPYL)-PYRROLINIUM
 SP NAP
 DELTA-AMINO-LEVULINIC-ACID SP
 NAP
 AMMONIA(NH₃) 1,030 SD NAP
 ALPHA-AMYLASE
 BETA-AMYLASE
 ALPHA-AMYRIN
 BETA-AMYRIN SH NAP
 ANILINE 0.6??? SD NAP
 ANTHERAXANTHIN LF NAP
 ANTHRANILIC-ACID LF NAP
 ANTHRANILIC-ACID-BETA-D-GLU-
 COSIDE LF NAP
 APIFOROL SI NAP
 APIGENIDIN SI NAP
 APIGENIN-GLYCOSIDE
 ARABINOSE
 ARACHIDIC-ACID
 ARGININE 1,310-5,450 SD USA

- ARSENIC 0.0006-0.211 SD HAM33(4):42
 USG
 ASCORBIC-ACID 0-85 SD CRC NAP
 WOI USA
 ASCORBIC-ACID 11 SI PED 6/
 ASH 10,000-90,000 SD USG
 ASH 33,000 SI PED 6/
 ASPARTIC-ACID 2,440-10,150 SD USA
 ASTRAGALIN PO NAP
 BARIUM 0-14 SD USG
 BAZZANENE RT NAP
 BENZALDEHYDE 1,000 EO(SI) NAP
 BENZOXAZIONE SP NAP
 2(3)-BENZOXAZOLINONE SP NAP
 BENZOTHAZOLE 26,000 STOM NAP
 BENZYLAMINE 3.4 SD NAP
 BENZYL-FORMATE 3,000 STOM NAP
 BETAINE 59 RT NAP
 BETAINE 234 SH NAP
 BETAINE SI JAD
 BIOTIN 0.02-0.06 COB 1/ WOI
 BIPHENYL SI NAP
 BISABOLOL (9%EO)
 BORON 0-15 SD USG
 BUTAN-1-OL SI NAP
 BUTENYL-ISOTHIOCYANATE SD NAP
 CADAVERINE
 DELTA-CADINENE LF NAP
 CADMIUM 0-1 SD HAM33(4):42 USG
 CAFFEIC-ACID 0.7 SH NAP
 CAFFEIC-ACID-ESTER LF
 2-O-CAFFEOYLHYDROXY-CITRIC-ACID
 SH NAP
 3-O-CAFFEOYLQUINIC-ACID
 5-O-CAFFEOYLQUINIC-ACID
 CALCIUM 10-181 (-4,500) SD CRC USA
 WOI USG
 CALCIUM 2,520 SI PED 6/
 CAMPESTEROL SD NAP
 CARBOHYDRATE 190,209-838,000 SD
 CRC USA WOI
 CARBOHYDRATES 825,000 SI PED 6/
 ALPHA-CAROTENE 0.5-2.5 SD
 JAF37:657
 BETA-CAROTENE 0.5-2.5 SD WOI USA
 JAF37:657
 BETA-CAROTENE 0 SI PED 6/
 CARVACROL SD NAP
 CARVACROL 144-216 SI JAD
 CARYOPHYLLENE LF NAP
 BETA-CARYOPHYLLENE RT NAP
 CASTASTERONE 0.12 PO NAP
 CELLULOSE
 CHELIDONIC-ACID 158 SH NAP
 CHLORINE 330 FR WOI
 2-(5-CHLORO-2-HYDROXY-7-
 METHOXY-1,4(2H)-BENZOXAZIN-
 3(4H0)-ONE-BETA-D-
 GLUCOPYRANOSIDE RT NAP
 CHOLESTEROL SD NAP
 CHOLINE 36 RT NAP
 CHOLINE 430 SD NAP
 CHOLINE 85 SH NAP
 CHROMIUM 0-1.65 SD USG
 CHROMIUM 13 SI PED 6/
 1,8-CINEOLE SI NAP
 CINNAMIC-ACID-ETHYL-ESTER SI
 NAP
 CITRONELLOL 19,000 STOM NAP
 COBALT 0.01-0.8 FR WOI USG
 COBALT 64 SI PED 6/
 COIXOL
 ALPHA-COPAENE LF NAP
 BETA-COPAENE LF NAP
 COPPER 0-20 FR USA WOI USG
 P-COUMARIC-ACID 4-46 SD CRC(FNS)
 P-COUMARIC-ACID 1 SH CRC(FNS)
 COUMARIC-ACID-ESTER LF WOI
 COUMARIN 2,000 STOM NAP
 2-O-P-COUMAROYL-HYDROXY-CITRIC-
 ACID SH NAP
 3-O-COUMARYLQUINIC-ACID
 5-O-COUMARYLQUINIC-ACID
 CROCETIN LF NAP
 CRYPTOXANTHIN
 CUBEENOL 5,000 STOM NAP
 CYANIDIN SI NAP
 CYANIDIN-3-DIMALONYL-GLUCOSIDE
 LF NAP
 CYANIDIN-3-GALACTOSIDE-P-
 COUMARIC-ACID-ESTER
 CYANIDIN-3-
 (6'-MALONYL-GLUCOSIDE) LF NAP
 CYANIDIN-3-MONOSIDE
 CYANIN COB NAP
 CYCLOARTENOL SH NAP
 CYCLOEUCALENOL SH NAP
 CYCLOSADOL SD NAP
 CYCLOSATIVENE LF NAP
 CYSTATHIONE 0.009-0.01 SP NAP
 CYSTINE 260-1,082 SD USA
 DAUCOSTEROL 440 SI NAP
 DEC-TRANS-2-EN-1-AL 3,000 EO(SI)
 NAP
 DEC-TRANS-2-TRANS-4-DIEN-1-AL
 37,000 EO(HUSK) NAP
 DEC-TRANS-2-TRANS-4-DIEN-1-AL
 6,000-20,000 EO(SI) NAP

DEC-TRANS-2-CIS-4-DIEN-1-AL 13,000
 EO(HUSK) NAP
 DEC-TRANS-2-CIS-4-DIEN-1-AL 7,000
 EO(SI) NAP
 DECA-TRANS-2-TRANS-7-TRIEN-1-AL
 37,000 EO(HUSK) NAP
 DECAN-1-AL 10,000-90,000 EO(SI) NAP
 DECAN-1-OL SI NAP
 DECAN-2-OL 15,000 EO(SD) NAP
 DECAN-2-ONE EO(SD) NAP
 5-DEHYDRO-AVENASTEROL SD NAP
 7-DEHYDRO-AVENASTEROL SD NAP
 DIAMINO-PROPANE SP NAP
 DIETHYL-AMINE SD NAP
 O-DIETHYL-PHTHALATE SI NAP
 DIGALACTOSYL-DIGLYCERIDE SD
 DIHYDRO-PHASEIC-ACID FL NAP
 2,3-DIHYDRO-2-PYRAN-2-
 CARBOXALDEHYDE 3,000 STOM NAP
 5,6-DIHYDRO-2-PYRAN-2-
 CARBOXALDEHYDE 4,000 STOM NAP
 DIHYDROSITOSTEROL
 2-(2,4-DIHYDROXY-1,4(2H)-
 BENZOXAZIN-3(4H)-ON-BETA-D-
 GLUCOSIDE SP NAP
 2,4-DIHYDROXY-6,7-DIMETHOXY-
 2H,1,4-BENZOXAZIN-3-ONE SP NAP
 2-(2,4-DIHYDROXY-7-METHOXY-
 1,4(2H)-BENZOXAZIN-3(4H) ONE)-
 BETA-D-GLUCOSIDE SP NAP
 2-(2,4-DIHYDROXY-7-METHOXY-1,4-
 BENZOXAZIN-3-ONE-BETA-D-
 GLUCOPYRANOSIDE SP NAP
 1,2-DIMETHOXY-BENZENE HUSK NAP
 6,7-DIMETHOXY-2-BENZOXAZOLIN-2-
 ONE PL NAP
 DIMETHYL-AMINE 1.1-3.5 SD NAP
 1,2-DIMETHYL-4-ETHYL-BENZENE SI
 NAP
 1,3-DIMETHYL-4-ETHYL-BENZENE SI
 NAP
 DIOXYCINNAMIC-ACID
 1,1-DIPHENYL-ETHANE 4,000 STOM
 NAP
 DODECAN-1-AL EO(SI) NAP
 EO 800-1,200 SILK HHB
 ERGOSTEROL RT NAP
 ERGOSTEROL SI JAD
 ESTRONE 0.04 OI(SD) NAP
 ETHANOL SI NAP
 ETHYL-ACETATE SI NAP
 ETHYLAMINE 2.4 SD NAP
 24-ETHYL-CHOLESTEROL RT NAP
 2-ETHYL-1-CYCLOHEXEN-1-YL (8%EO)
 4-ETHYL-GUAIACOL SD NAP
 2-ETHYL-HEXAN-1-OL 10,000
 EO(HUSK) NAP
 24-ETHYLIDENE-LOPHENOL SH NAP
 ETHYL-METHYL-AMINE SD NAP
 ETHYL-PHENYLACETATE
 250,000-740,000 EO(SI) NAP
 EUGENOL SD NAP
 TRANS-BETA-FARNESENE LF NAP
 FAT 10,480-54,579 SD CRC USA
 FAT 43,000 SI PED
 FERREDOXIN 37 LF WOI
 FERULIC-ACID 6-27 SD CRC(FNS)
 FERULIC-ACID SP NAP
 TRANS-FERULIC-ACID PL PAS
 1-O-FERULOYL-BETA-D-GLUCOSE LF
 NAP
 2-O-FERULOYL-HYDROXY-CITRIC-
 ACID SH NAP
 FERULOYLQUINIC-ACID SP NAP
 3-FERULOYLQUINIC-ACID LF NAP
 5-O-FERULOYLQUINIC-ACID
 FERULIC-ACID LF WOI
 FIBER 81,000 SI PED 6/
 FLUORENE SI NAP
 FOLACIN 1-2 FR USA WOI
 FOLIC-ACID 0.142-0.4 SD WOI
 FRIEDELIN SH NAP
 FRUCTOSE 1,000-4,000 FR WOI
 FUCOSE RT NAP
 FURFURAL PL NAP
 GALACTOSE
 GALACTOXYLASE
 GALLIC-ACID TC NAP
 GEOSMIN 2,000 EO(HUSK) NAP
 GEOSMIN 4,000 EO(SD) NAP
 GERANIAL HUSK NAP
 GERANIOL SI NAP
 GERANYL-ACETONE SD NAP
 GIBBERELLINS FL NAP
 GLOBULIN 4,500-6,000 SD
 GLUCOSE 2,000-5,000 FR WOI
 ALPHA-GLUCOSIDASE
 D-GLUCURONIC-ACID
 GLUTAMIC-ACID 6,360-26,457 SD USA
 GLUTAMIC-ACID-DECARBOXYLASE
 GLUTATHIONE 54-169 SD JAD NAP
 GLUTELIN 14,685-67,325 FR WOI
 GLYCEROL
 GLYCINE 1,270-5,283 SD USA
 GLYCOLIC-ACID SI NAP
 GUAIACOL SD NAP
 GUANIDINE
 HEMICELLULOSE COB NAP

- HEPTAN-1-AL 10,000 EO(HUSK) NAP
 HEPTAN-1-AL 20,000-50,000 EO(SI) NAP
 HEPTAN-1-OL 20,000-30,000 EO(SI) NAP
 HEPTAN-2-OL 56,000 EO(HUSK) NAP
 HEPTAN-2-OL 250,000 EO(SD) NAP
 HEPTAN-2-OL 10,000-20,000 EO(SI) NAP
 HEPTAN-2-OL 15,000 EO(SD) NAP
 HEPT-4-EN-OL 64,000 EO(HUSK) NAP
 HEPT-4-EN-OL 120,000 EO(SD) NAP
 HEPT-CIS-4-EN-2-OL 10,000 EO(SI) NAP
 HEPT-4-EN-2-ONE 15,000 EO(SD) NAP
 HEPT-CIS-4-EN-2-ONE LF NAP
 HEPTA-TRANS-2-EN-1-AL 5,000 EO(SI) NAP
 HEPTA-TRANS-2-CIS-4-DIEN-1-AL 19,000-21,000 EO(HUSK) NAP
 HEPTA-TRANS-2-CIS-4-DIEN-1-AL 3,000 EO(SI) NAP
 HEPTA-TRANS-2-TRANS-4-DIEN-1-AL 3,000 EO(SI) NAP
 HEXADECENOIC-ACID SD NAP
 HEXAN-1-AL 50,000 EO(HUSK) NAP
 HEXAN-1-AL 2,000-10,000 EO(SI) NAP
 HEXAN-1-OL 62,000 EO(HUSK) NAP
 HEXAN-1-OL 2,000-10,000 EO(SI) NAP
 HEXAN-2-OL SI NAP
 HEXAN-2-ONE EO(HUSK) NAP
 HEXAN-2-ONE EO(SD) NAP
 HEX-TRANS-2-TRANS-4-DIEN-1-AL 3,000 EO(SI) NAP
 HEX-1-EN-3-OL SI NAP
 HEX-CIS-3-EN-1-AL LF NAP
 HEX-CIS-3-EN-1-OL 52,000 EO(HUSK) NAP
 HEX-CIS-3-EN-1-OL 5,000 EO(SI) NAP
 HEX-TRANS-2-EN-1-AL 68,000 EO(HUSK) NAP
 HEX-TRANS-3-EN-1-OL EO(SI) NAP
 HEXENYL-ISOTHIOCYANATE SD NAP
 HISTIDINE 890-3,702 SD USA
 HORDENINE SI 411/
 HYDROXAMIC-ACID 4.2 μ M/KG LF NAP
 P-HYDROXYBENZALDEHYDE COB NAP
 2-(2-HYDROXY-1,4(2H)-BENZOXAZIN-3(4H)-ON-BETA-D-GLUCOSIDE SP NAP
 4-HYDROXYBENZOIC-ACID TC NAP
 1-P-HYDROXY-TRANS-CINNAMOYL)-GLYCEROL 45 SD NAP
 5-HYDROXY-TRANS-FERULIC-ACID PL NAP
 2-(2-HYDROXY-7-METHOXY-1,4(2H)-BENZOXAZIN-3(4H)-ON-BETA-D-GLUCOSIDE SP NAP
 2-(2-HYDROXY-7-METHOXY-1,4-BENZOXAZIN-3-ONE-BETA-D-GLUCOPYRANOSIDE RT NAP
 8-HYDROXY-QUINOL-2-ONE-4-CARBOXYLIC-ACID-8'-O-BETA-D-GLUCOSIDE SD NAP
 INDOLE 4,000 STOM NAP
 INDOLE-3-ACETIC-ACID SD NAP
 INDOLE-3-ACETIC-ACID-CELLULOSEGLUCAN SD NAP
 INDOLE-3-ACETIC-ACID-MYOINOSITOL SD NAP
 3,7-DIHYDROXY-INDOLIN-2-ONE-3-ACETIC-ACID-7'-O-BETA-D-GLUCOSIDE 1.2 SD NAP
 INOSITOL
 IODINE 0.012 SD WOI
 BETA-IONONE 12,000 EO(HUSK) NAP
 BETA-IONONE 1,000 EO(SI) NAP
 BETA-IONONE 10,700 STOM NAP
 IRON 5-41 (-450) SD USA WOI USG 1/
 IRON 504 SI PED 6/
 ISOAMYL-AMINE SP NAP
 ISOBEHENIC-ACID 80 SD WOI
 ISOLEUCINE 1,290-5,366 SD WOI
 (-)-TRANS-ISO-MENTH-5-EN-2-OL
 ISOPROPYLAMINE 2.3 SD NAP
 ISOQUERCITRIN PL PAS
 ISORHAMNETIN-3-O-BETA-D-GLUCOSIDE PO NAP
 ISORHAMNETIN-3,4'-O-DIGLUCOSIDE PO NAP
 ISORHAMNETIN-3-O-GLUCOSIDE-4'-O-DIGLUCOSIDE PO NAP
 ISORHAMNETIN-3-O-NEOHESPEROSIDE PO NAP
 KAEMPFEROL-3-O-ALPHA-L-GALACTOSIDE PO NAP
 KILOCALORIES 3,690 SI PED 6/
 LACTIC-ACID
 LANOSTEROL
 LEAD 0-14 SD HAM33(4):42 USG
 LEUCINE 3,480-14,477 SD USA
 LEUCOCYANIDIN
 LEUCOPELARGONIDIN
 LIGNIN 213,000-245,000 ST WOI
 LIGNOCERIC-ACID FR HHB
 LIMONENE 7,000 EO(SI)
 LINALOOL PL PAS
 LINGIFOLENE RT NAP
 LINOLEIC-ACID 5,420-22,547 SD USA

ALPHA-LINOLENIC-ACID 160-666 SD USA	2-METHYL-PENTAN-3-ONE SI NAP
LIPOXIDASE	2-METHYL-PENT-2-EN-1-AL SI NAP
LONGIFOLENE RT NAP	N-METHYL-beta-PHENETHYLAMINE 1.1 SD NAP
LOPHENOL SH NAP	METHYL-PHENYLACETATE 30,000-40,000 EO(SI) NAP
LITHIUM 0.048-0.22 SD USG	2-METHYL-PROPAN-1-OL SI NAP
LUTEIN LF NAP	METHYL-PYRAN-2-CARBOXALDEHYDE 4,000 STOM NAP
LUTEIN + ZEAXANTHIN 7.3-22 SD JAF37:657	METHYL-2-THIENYL-KETONE 10,000 STOM NAP
LUTEOFOROL SI NAP	MEVALONIC-ACID 14 SD NAP
LUTEOLINIDIN SI NAP	MOLYBDENUM 0.084-6.3 SD USG
LYSINE 1,370-5,699 SD USA	MONOGALACTOSYL-DIGLYCERIDE ALPHA-MUURULENE
MAGNESIUM 100-1,600 (-10,800) SD USG 1/	MYO-INOSITOL
MAGNESIUM 1,790 SI PED 6/	MYRCENE SD NAP
MALEIC-ACID	MYRECITIN-GLUCOSIDE
MALIC-ACID	MYRISTIC-ACID SD NAP
MALIC-ACID-DEHYDROGENASE	NAPHTHALENE 3,000 EO(SI) NAP
MALONIC-ACID	NEOCRYPTOXANTHIN
MALTOSYL-TRANSFERASE	NEOXANTHIN LF NAP
MANGANESE 0.84-63 SD USG	NEROLIDOL 14,500 STOM NAP
MANGANESE 34 SI PED 6/	NIACIN 16-71 SD USA WOI
MANNOSE 1-7	NIACIN 4-16 COB WOI
MAYSIN 9,000 SI NAP	NIACIN 25 SI PED 6/
MENTHOL SI JAD	NICKEL 0.12-6.3 SD HAM33(4):42 USG
MENTHOL 28,000 STOM NAP	NICOTIANAMINE 0.02 µM/G LF NAP
MERCURY 0.00012-0.072 SD HAM33(4):42 USG	GAMMA-NONALACTONE SI NAP
MESO-INOSITOL PO NAP	NONAL-N-2-OL SI NAP
METHIONINE 670-2,787 SD USA	NONAN-1-AL 80,000-28,000 EO(SI) NAP
6-METHOXY-2-(3)-BENZOXAZOLINONE SH NAP	NONAN-1-OL 30,000 EO(SD) NAP
6-METHOXY-BENZOXAZOLIN-2-ONE PL NAP	NONAN-2-OL 132,000 EO(HUSK) NAP
METHYLAMINE 27 SD NAP	NONAN-2-OL 260,000 EO(SD) NAP
2-METHYL-BUTAN-1-AL SI NAP	NONAN-2-OL 2,000 EO(SI) NAP
2-METHYL-BUTAN-1-OL SI NAP	NONAN-2-ONE 20,000 EO(SD) NAP
3-METHYL-BUTAN-1-OL SI NAP	NON-TRANS-2-EN-1-AL 10,000 EO(HUSK) NAP
24-METHYL-CHOLESTEROL RT NAP	NON-TRANS-2-EN-1-AL 10,000 EO(SI) NAP
24-METHYL-23-DEHYDRO-CHOLES- TEROL OI(SD) NAP	NON-CIS-3-EN-1-OL 30,000 EO(SD) NAP
TRANS-24-METHYL-23-DEHYDRO- LOPHENOL SD NAP	NONA-TRANS-2-TRANS-4-DIEN-1-AL 3,000 EO(SI) NAP
24-METHYLENE-CHOLESTEROL PO NAP	3'-NUCLEOTIDASE TC NAP
24-METHYLENE-CYCLOARTENOL PL PAS	OBTUSIFOLIOL SH NAP
24-METHYLENE-LOPHENOL SH NAP	OCTADECADIENOIC-ACID SD NAP
1-(3-METHYL-2-FURYL)PROPANE 28,000 STOM NAP	OCTADECATRIENOIC-ACID SD NAP
4-METHYL-GUALACOL SD NAP	OCTADECENOIC-ACID SD NAP
3-METHYL-INDOLE 7,000 STOM NAP	OCTAN-1-OL 5,000-10,000 EO(SI) NAP
3'-O-METHYL-MAYSIN SI NAP	OCTAN-2-OL 12,000 EO(HUSK) NAP
2-METHYL-NAPHTHALENE EO(SI) NAP	OCTAN-2-OL 20,000 EO(SD) NAP
	OCTAN-2-ONE EO(HUSK) NAP
	OCTAN-2-ONE EO(SD) NAP
	OCTA-3-5-DIENE-2-ONE SI NAP

- OCT-1-EN-3-OL 25,000 EO(HUSK) NAP
 OCT-1-EN-3-OL 1,000 EO(SI) NAP
 OCT-TRANS-2-EN-1-AL 37,000
 EO(HUSK) NAP
 OCT-TRANS-2-EN-1-AL 1,000 EO(SI)
 NAP
 OCT-TRANS-2-EN-1-OL 10,000
 EO(HUSK) NAP
 OCTA-TRANS-2-TRANS-5-DIEN-2-ONE
 2,000 EO(SI) NAP
 OLEIC-ACID 3,470-14,435 SD USA
 ORIENTIN SI NAP
 OXALIC-ACID 99 FR WBB
 PALMITIC-ACID 1,710-7,114 SD USA
 PALMITOLEIC-ACID FR HHB
 PANTOTHENIC-ACID 4-34 SD USA
 PANTOTHENIC-ACID 3-7 COB WOI
 PECTINS 5,900
 PECTIN 10,000-17,000 LF WOI
 PELARGONIDIN SI NAP
 PELARGONIDIN-3-GLUCOSIDE
 PENTAN-1-OL SI NAP
 PENTAN-2-OL SI NAP
 PENTAN-3-ONE SI NAP
 PENT-1-EN-2-OL SI NAP
 2-PENTYL-FURAN 29,000 EO(HUSK)
 NAP
 2-PENTYL-FURAN 10,000 EO(SD)
 NAP
 2-PENTYL-FURAN 3,000 EO(SI) NAP
 PEROXIDASE AN NAP
 PHENANTHRENE 11,000 STOM NAP
 PHENETHYL-ALCOHOL SI NAP
 PHENYLACETALDEHYDE 13,000
 EO(HUSK) NAP
 PHENYLACETALDEHYDE 1,000 EO(SI)
 NAP
 PHENYLALANINE 1,500-6,240 SD USA
 PHENYLALANINE-AMMONIALLYASE
 2-PHENYLALDEHYDE 14,000 STOM
 NAP
 PHOSPHATIDYL-CHOLINE
 PHOSPHATIDYL-ETHANOLAMINE
 PHOSPHATIDYL-INOSITOL
 PHOSPHOLIPIDS SD NAP
 PHOSPHOENOL-PYRUVATE SP NAP
 PHOSPHORUS 600-4,066 (-21,600) SD
 CRC USA USG 1/
 PHOSPHORUS 287 SI PED 6/
 PHYTIN
 PHYTOFLUENE
 PHYTOHAEMAGGLUTININ SI NAP
 ALPHA-PINENE EO(HUSK) NAP
 BETA-PINENE 3,000 EO(SI) NAP
 POTASSIUM 2,400-11,450 (-36,000) SD
 CRC USA USG 1/
 POTASSIUM 12,200 SI PED 6/
 PROLAMINE 45,000-55,000 SD WOI
 PROLINE 69 RT NAP
 PROLINE 2,920-12,147 SD CRC USA
 PROLINE 11 SH NAP
 PROPAN-1-OL SI NAP
 N-PROPYL-GALLATE SD NAP
 PROTEIN 22,520-132,000 SD CRC USA
 WOI
 PROTEIN 99,000 SI PED
 PROTOCATECHUIC-ACID TC NAP
 PUTRESCINE SP NAP
 PYRIDOXINE 1-3 COB WOI
 PYRROLIDINE 3.5??? SD NAP
 PYRUVIC-ACID SP NAP
 QUERCETIN POLLEN
 QUERCETIN-DIGLUCOSIDE
 QUERCETIN-3-O-BETA-D-GLUCOSIDE
 PO NAP
 QUERCETIN-3,3'-O-BETA-D-GLUCOSIDE
 PO NAP
 QUERCETIN-3,7-DI-O-BETA-D-GLU-
 COSIDE PO NAP
 QUERCETIN-3-O-BETA-D-GLUCOSYL-O-
 ALPHA-L-GALACTOSIDE? PO NAP
 QUERCETIN-3-O-ALPHA-D-
 RHAMNOSYL-O-BETA-L-GALACTO-
 SIDE? PO NAP
 QUERCETIN-3-O-BETA-D-
 NEOHESPEROSIDE PO NAP
 QUINIC-ACID
 RAFFINOSE 1,000-3,000 FR WOI
 RHAMNOGALACTURONAN-I TC NAP
 2"-O-ALPHA-RHAMNOSYL-6C-(6-
 DEOXO-XYLO-HEXOS-4-ULOSYL)-
 APIGENIN SI NAP
 2"-O-ALPHA-RHAMNOSYL-6C-(6-
 DEOXO-XYLO-HEXOS-4-ULOSYL)-
 CHRYSOERIOLOL SI NAP
 RIBOFLAVIN 1-4 FR WOI USA
 RIBOFLAVIN 1-3 COB WOI
 RIBOFLAVIN 1.5 SI PED 6/
 RIBONUCLEASE TC NAP
 RICINOLEIC-ACID
 SABINOL 6,000 STOM NAP
 SALICYLIC-ACID-METHYL-ESTER LF
 NAP
 SAPONIN 23,000-32,000 SILK
 SELENIUM 0.00006-0.5 SD USG
 SELENIUM 5.7 SI PED 6/
 SERINE 1,530-6,365 SD USA
 SEROTIN PL ANTIAPERTIF

SILICON 237 SI PED 6/
 SILVER 0.012-0.055 SD USG
 TRANS-SINAPIC-ACID PL NAP
 1-O-SINAPOYL-BETA-D-GLUCOSE LF
 NAP
 ALPHA-SITOSTEROL
 BETA-SITOSTEROL 1,300 SI NAP
 GAMMA-SITOSTEROL
 SODIUM 0-757 SD CRC USA
 SODIUM 130 SI PED 6/
 SPERMIDINE SD WOI
 SPERMINE SD WOI
 SQUALENE SD NAP
 STARCH SD NAP
 STEARIC-ACID 110-457 SD USA
 STIGMASTEROL SD NAP
 STRONTIUM 0.12-14 SD USG
 SUCCINIC-ACID
 SUCROSE 9,000-19,000 FR WOI
 SULFUR 6-1,140 FR WOI USG
 SYRINGALDEHYDE SD NAP
 SYRINGIC-ACID TC NAP
 TEASTERONE 0.041 PO NAP
 ALPHA-TERPINEOL SI NAP
 THIAMIN 2-8 FR WOI USA
 THIAMIN 2.1 SI PED 6/
 2-THIOPHENE-ACETALDEHYDE 4,000
 STOM NAP
 THREONINE 1,290-5,366 SD USA
 THYMOL SD NAP
 THYMOL SI JAD
 TIN 1-1.8 SD USG
 TIN TR SI PED 6/
 TITANIUM 0.06-63 SD USG
 TOCOPHEROLS 900-1,000 SD
 ALPHA-TOCOPHEROL 90-257 OI TOT
 GAMMA-TOCOPHEROL 752 OI TOT
 TRICARBALLYL-ACID
 TRICIN-GLYCOSIDE
 TRIDECAN-1-AL EO(HUSK) NAP
 TRIGONELLINE 4 SD NAP
 1,2,3-TRIMETHYL-BENZENE SI NAP
 1,2,4-TRIMETHYL-BENZENE SI NAP
 TRYPTOPHAN 230-957 SD USA
 TYPHASTEROL 0.066 PO NAP
 TYROSINE 1,230-5,117 SD USA
 UNDECAN-1-AL EO(HUSK) NAP
 UNDECAN-2-OL EO(HUSK) NAP
 UNDECAN-2-OL 45,000 EO(SD) NAP
 UNDECAN-2-ONE EO(HUSK) NAP
 UNDEC-TRANS-2-EN-1-AL 2,000 EO(SI)
 NAP
 UREASE
 URIDINE SD NAP

URONIC-ACID
 VALINE 1,850-7,696 SD USA
 VANADIUM 0.05-1.35 SD USG
 VANILLIC-ACID SP NAP
 VANILLIN 4-31 SD CRC(FNS)
 4-VINYL-4-DEETHYL-CHLOROPHYLL-A
 PL NAP
 VINYL-ETHYL-PHENETHYL-KETONE
 6,000 STOM NAP
 4-VINYL-GUAIACOL SD NAP
 P-VINYL-GUAIACOL EO(HUSK) NAP
 4-VINYL-PHENOL SD NAP
 VIOLAXANTHIN LF NAP
 VIT-B6 1-3 SD
 VIT-D3 LF NAP
 VITEXIN SI NAP
 WATER 100,000-885,000 SD USG
 WATER 620,000 SI PED 6/
 XANTHOTOXIN RT NAP
 XYLENE EO(HUSK) NAP
 XYLOARABINOSE
 XYLOSE
 ALPHA-YLANGENE 17,000 EO(SD) NAP
 YTTERBIUM 0.02-4.5 SD USG
 ALPHA-ZEACAROTENE
 BETA-ZEACAROTENE
 ZEANIN SD NAP
 ZEANOSIDE-B SD NAP
 ZEANOSIDE-C 1.2 SD NAP
 ZEATIN 0.014
 ZEAXANTHIN
 ALPHA-ZEIN SD JAD
 BETA-ZEIN
 ZEINOXANTHIN
 ZINC 4-20 (-252) SD USA WOI USG
 ZIRCONIUM 0.2-1.8 SD USG

1/ COB =corn cob; SI=SILK=cornsilk, a very
 important phytomedicinal. STOM=stomach
 (after NAP). HUSK=husk. Many seed data
 derived from USGS which often increased
 maxima and minima by a magnitude, but,
 on the contrary, with sulfur and sodium,
 other data were a magnitude higher than
 the USGS data. 6/SI=silk

ZINGIBER OFFICINALE ROSCOE

"GINGER"

ACETALDEHYDE EO 1/
 ACETIC-ACID RH NAP
 ACETONE EO 1/
 ALANINE 310-1,793 RT USA
 ALBUMIN 4,984-45,924 RT WOI

- ALLO-AROMADENDRINE 1-70 RH JAD
 NAP
 ALUMINUM 663 RT PED
 GAMMA-AMINOBUTYRIC-ACID RT
 WOI
 ANTI-METHYL-6-SHOGAOL RH NAP
 ANTI-METHYL-8-SHOGAOL RH NAP
 ANTI-METHYL-10-SHOGOAL RH NAP
 ARGININE 430-2,486 RT USA
 AROMADENDRINE RH NAP
 ASCORBIC-ACID 0-317 RT CRC
 ASH 7,700-200,000 RT CRC PED USA
 ASPARAGINE 500 RH BML NAP
 ASPARTIC-ACID 2,080-11,990 RT USA
 BETA-BISABOLENE 5-3,600 RH BML
 BETA-BISABOLOL 5-295 RH JAD NAP
 D-BORNEOL 14-1,102 RT BML JAD NAP
 BORNYL-ACETATE 2-105 RT BML JAD
 NAP
 BORON 1-4 RT BOB
 SEC-BUTANOL EO BML
 TERT-BUTANOL EO BML
 N-BUTYRALDEHYDE EO 1/
 ALPHA-CADINENE RH NAP
 DELTA-CADINENE 1-65 RH NAP
 ALPHA-CADINOL RH NAP
 CAFFEIC-ACID TR RH NAP
 CALAMENEN RH NAP
 CALCIUM 150-3,458 RT CRC USA
 CAMPHENE 28-6,300 RH BML JAD NAP
 CAMPHENE-HYDRATE RH NAP
 CAMPHOR 1-60 RH NAP
 CAPRIC-ACID 1,800-1,980 RT USA
 CAPRYLIC-ACID 70-380 RT USA
 CAPSAICIN? PL PAS
 CARBOHYDRATES 92,000-823,240 RT
 CRC USA
 CAR-3-ENE RH NAP
 DELTA-CAR-3-ENE RH NAP
 BETA-CAROTENE 0-4 RT CRC
 CARYOPHYLLENE EO NAP
 BETA-CARYOPHYLLENE 0.7-45 RH
 NAP
 CEDOROL RH NAP
 CHAVICOL RH NAP
 CHLOROGENIC-ACID PL PAS
 CHROMIUM 6-20 RT PED ABS 5/
 CINEOLE RH NAP
 1,8-CINEOLE 33-5,000 RH BML JAD NAP
 CITRAL 0-13,500 RH BML JAD NAP
 CITRONELLAL 2-145 RH JAD NAP
 CITRONELLOL 2-6,500 RH JAD NAP
 CITRONELLYL-ACETATE RH NAP
 COBALT 0.9-42 RT PED ABS 5/
 ALPHA-COPAENE RH NAP
 COPPER 3-16 RT SMO USA ABS 5/
 P-COUMARIC-ACID 19 RH NAP
 CUMENE 1 RT
 ALPHA-CURCUMENE RH NAP
 AR-CURCUMENE 20-9,520 RH BML JAD
 NAP
 CURCUMIN PL PAS
 P-CYMENE 2-1,300 RH JAD NAP
 P-CYMEN-8-OL 0.5-35 RH JAD NAP
 CYSTINE 80-462 RT USA
 DECANAL 5-100
 N-DECANAL EO 1/
 DECYLALDEHYDE RT
 6-DEHYDROGINGERDIONE RT NAP
 6,10-DEHYDROGINGERDIONE RT NAP
 10-DEHYDROGINGERDIONE RT NAP
 6-DIHYDROGINGERDIONE RT NAP
 DELPHINIDIN PL PAS
 DEMETHYL-HEXAHYDROCURCUMIN
 RH NAP
 DIETHYLSULFIDE EO 1/
 DIHYDROGINGEROL RT
 DODECANOIC-ACID RH NAP
 BETA-ELEMENE 2-500 RH JAD NAP
 ELEMOL 3-190 RH JAD NAP
 EO 800-50,000 RT OR RH JAD NAP
 EO 60,000 RE
 10-EPIZONARENE EO BML
 8-BETA-17-EPOXY-LABD-TRANS-12-
 ENE-15,16-DIAL 40 RH NAP
 ETHYL-ACETATE EO 1/
 ETHYL-ISOPROPYL-SULFIDE EO 1/
 ETHYL-MYRISTATE RH NAP
 BETA-EUDES MOL 7-465 RH JAD NAP
 GAMMA-EUDES MOL 2-115 RH JAD
 NAP
 FARNESAL 1-100 RH JAD NAP
 FARNESENE 245-4,910 RH BML JAD
 ALPHA-FARNESENE 20-1,250 RH NAP
 TRANS-BETA-FARNESENE 1-60 RH
 NAP
 FARNESOL RT CCO
 FAT 7,000-77,000 RT CRC USA
 FERULIC-ACID PL PAS
 FIBER 9,000-171,000 RT CRC PED USA
 FLUORINE 2 RT WOI
 FRUCTOSE RT WOI
 FURANOGERMENONE RH NAP
 FURFURAL TR NAP
 GADOLEIC-ACID 70-380 RT USA
 GERANIAL 35-20,000 RH NAP
 GERANIOL 2-345 RH JAD NAP
 GERANYL-ACETATE RH NAP

GERMANIUM 87-169 RH NAP
 GINGEDIACETATE RT CCO
 6-GINGEDIOL RT CCO
 6-GINGEDIOL-ACETATE RH NAP
 6-GINGEDIOL-ACETATE-METHYL-
 ETHER RH NAP
 6-GINGEDIOL-METHYL-ETHER RH NAP
 8-GINGEDIOL RT CCO
 10-GINGEDIOL RT CCO
 6-GINGERDIONE RT NAP
 10-GINGERDIONE RT NAP
 GINGERENONE-A 118 RH NAP
 GINGERENONE-B 4.7 RH NAP
 GINGERENONE-C 14.2 RH NAP
 GINGEROLS 13,200 RT
 4-GINGEROL RH NAP
 6-GINGEROL 900-7,138 RH NAP
 7-GINGEROL RH NAP
 8-GINGEROL 200-1,069 RH NAP
 9-GINGEROL RH NAP
 10-GINGEROL 200-1,862 RH NAP
 12-GINGEROL RH NAP
 14-GINGEROL RH NAP
 16-GINGEROL RH NAP
 GINGEROL-METHYL-ETHER RH NAP
 RT
 GINGERONE RT
 GLANOLACTONE 120 RH NAP
 GLOBULIN 2,366-21,801 RT WOI
 GLUCOSE RT WOI
 GLUTAMIC-ACID 1,620-9,328 RT USA
 GLUTELIN 2,506-23,091 RT WOI
 GLYCINE 430-2,486 RT USA
 GLYOXAL EO BML
 GUAIL RH NAP
 N-HEPTANE RH NAP 1/
 HEPTAN-2-OL 1-135 RH JAD NAP
 HEPTAN-2-ONE RH JAD NAP
 HEXAHYDROCURCUMIN RH CCO
 HEXAN-1-AL 2-35 RH NAP
 HEXANOL RH NAP
 CIS-HEXAN-3-OL RH NAP
 BETA-HIMACHALENE RH NAP
 HISTIDINE 300-1,738 RT USA
 HUMULENE RT
 P-HYDROXYBENZOIC-ACID PL PAS
 1-(4-HYDROXY-3-METHOXYPHENYL)-
 3,5-OCTANEDIOL RT CCO
 1-(4-HYDROXY-3-METHOXYPHENYL)-
 3,5-DIACETOXYOCTANE RT CCO
 BETA-IONONE RH NAP
 IRON 4-162 RT CRC USA
 ISOEUGENOL-METHYL-ETHER 0.6-40
 RH JAD NAP
 ISOGINGERENONE-B 4.7 RH NAP
 ISOLEUCINE 510-2,926 RT USA
 ISOVALERALDEHYDE EO 1/
 KAEMPFEROL PL PAS
 KILOCALORIES 690-3,764 RT USA
 LAURIC-ACID 390-3,630 RT USA
 LECITHIN RT AYL
 LEUCINE 740-4,257 RT USA
 LIMONENE 17-1,050 RH JAD NAP
 LINALOOL 2-1,500 RH JAD NAP
 TRANS-LINALOOL-OXIDE RH NAP
 LINOLEIC-ACID 1,200-11,220 RT USA
 ALPHA-LINOLENIC-ACID 340-3,190 RT
 USA
 LYSINE 570-3,110 RT USA
 MAGNESIUM 430-2,690 RT PED USA
 MANGANESE 106-350 RT SMO USA
 ABS 5/
 MENTHOL-ACETATE RH NAP
 METHIONINE 130-737 RT USA
 METHYL-ACETATE EO 1/
 METHYL-ALLYL-SULFIDE EO 1/
 METHYL-CAPRYLATE EO 1/
 6-METHYLGINGEDIACETATE RT CCO
 6-METHYLGINGEDIOL RT CCO
 METHYL-6-GINGEROL RH NAP
 METHYL-8-GINGEROL RH NAP
 METHYL-12-GINGEROL RH NAP
 METHYL-GLYOXAL EO BML
 METHYL-HEPTENONE RH BML NAP
 6-METHYL-HEPT-5-EN-2-ONE 2-50 RH
 JAD NAP
 METHYL-ISOBUTYL-KETONE EO BML
 METHYL-NONYL-KETONE RH NAP
 METHYL-6-SHOGAL RH NAP
 METHYL-8-SHOGAL RH NAP
 METHYL-10-SHOGAL RH NAP
 MUFA 1,540-8,400 RT USA
 ALPHA-MUUROLENE RH NAP
 GAMMA-MUUROLENE 7-455 RH JAD
 NAP
 MYRCENE 2-950 RF JAD NAP
 BETA-MYRCENE 2-950 RF JAD NAP
 MYRICETIN PL PAS
 MYRISTIC-ACID 180-1,650 RT USA
 MYRTENAL 0.5-30 RH JAD NAP
 NEOISOPULEGOL RH NAP
 NERAL 20-13,000 RH JAD NAP
 NEROL RH NAP
 NEROLIDOL EO 1/
 TRANS-NEROLIDOL 5-350 RH NAP
 NIACIN 5-135 RT CRC USA
 NICKEL 2.0-5.2 RT ABS 5/
 NITROGEN 16,000-24,440 RT WOI

- NONANAL 2-50 RT
 N-NONANE EO 1/
 NONAN-2-OL 5-100 RH BML
 N-NONANOL EO 1/
 NONAN-2-ONE 8-160 RH JAD NAP
 N-NONANONE RH NAP
 NONYL-ALDEHYDE RH NAP
 OCTAN-1-AL 2-40 RH NAP
 N-OCTANE RH EO 1/
 TRANS-OCTEN-2-AL RH NAP
 OLEIC-ACID 1,190-11,000 RT USA
 OXALIC-ACID 5,000 RH NAP
 9-OXO-NEROLIDOL RH NAP
 PALMITIC-ACID 1,200-11,220 RT USA
 PALMITOLEIC-ACID 210-1,145 RT USA
 PANTOTHENIC-ACID 2-11 RT USA
 PARADOL RH WOI
 6-PARADOL RH NAP
 PATCHOULI-ALCOHOL RH NAP
 PENTOSANS RH WOI
 PERILLEN RH NAP
 PERILLENE 1-95 RH JAD NAP
 ALPHA-PHELLANDRENE 3-200 RH JAD
 NAP
 BETA-PHELLANDRENE 32-2,850 RH
 JAD NAP
 PHENYLALANINE 450-2,455 RT USA
 3-PHENYL-BENZALDEHYDE RH NAP
 4-PHENYL-BENZALDEHYDE RH NAP
 PHOSPHATIDIC-ACID RT AYL
 PHOSPHORUS 320-5,323 RT CRC USA
 PHYTOSTEROLS 150-913 RT USA
 ALPHA-PINENE 10-1,950 RH JAD NAP
 BETA-PINENE 4-265 RH JAD NAP
 PIPECOLIC-ACID 320 RH NAP
 POTASSIUM 2,640-25,079 RT CRC USA
 PROLAMINE 1,540-14,190
 PROLINE 410-2,376 RT USA
 N-PROPANOL EO 1/
 PROPIONALDEHYDE EO 1/
 PROTEIN 14,000-129,000 RT CRC USA
 PUFA 1,540-8,400 RT USA
 QUERCETIN PL PAS
 RAFFINOSE RT WOI
 RIBOFLAVIN 0-5 RT CRC USA
 ROSEFURAN 1-90 RH JAD NAP
 SABINENE 0.5-35 RH JAD NAP
 GAMMA-SELINENE 35-700 RT
 SELENIUM 9-10 RT PED
 SELINA-3-7(11)-DIENE 1-65 RH JAD
 NAP
 ALPHA-SELINENE RH NAP
 BETA-SELINENE RH NAP
 SERINE 450-2,596 RT USA
 CIS-SESQUIABINENE-HYDRATE RH
 NAP
 BETA-SESQUIPELLANDRENE 34-6,012
 RH JAD NAP
 CIS-BETA-SESQUIPELLANDROL EO 1/
 TRANS-BETA-SESQUIPELLANDROL
 6-360 RH JAD NAP
 CIS-SESQUISABINENE-HYDRATE
 SESQUITRUFENE EO 1/
 SFA 2,030-11,085 RT USA
 STEARIC-ACID 170-925 RT USA
 SHIKIMIC-ACID LF NAP
 SHOGAOLS 1,800 RT
 6-SHOGAOL 40 RH NAP
 CIS-6-SHOGAOL 40 RH NAP
 TRANS-6-SHOGAOL 40 RH NAP
 8-SHOGAOL RH NAP
 CIS-8-SHOGAOL 40 RH NAP
 TRANS-8-SHOGAOL 40 RH NAP
 10-SHOGAOL RH NAP
 CIS-10-SHOGAOL RH NAP
 TRANS-10-SHOGAOL RH NAP
 CIS-12-SHOGAOL RH NAP
 TRANS-12-SHOGAOL RH NAP
 SILICON 285 RT PED
 BETA-SITOSTEROL PL PAS
 SODIUM 60-709 RT CRC USA
 STARCH 123,000-500,000 RT AYL NAP
 WOI
 STEARIC-ACID 1,400-1,540 RT USA
 SUCROSE RT WOI
 TERPINEN-4-OL RH NAP
 ALPHA-TERPINENE 0.5-35 RH JAD NAP
 GAMMA-TERPINENE 0.4-25 RH JAD
 NAP
 ALPHA-TERPINEOL 8-500 RH JAD NAP
 TERPINOLENE 1-90 RH JAD NAP
 THIAMIN 0-3 RT CRC USA
 THREONINE 360-2,057 RT USA
 BETA-THUJONE RH NAP
 TIN 13 RT PED
 TRICYCLEN 2-115 RH BML JAD NAP
 2,2,4-TRIMETHYL-HEPTANE RH NAP
 TRYPTOPHAN 120-693 RT USA
 TYROSINE 200-1,122 RT USA
 UNDECAN-2-OL 1-25 RH JAD NAP
 N-UNDECANONE RH NAP
 UNDECAN-2-ONE TR RH JAD NAP
 VALINE 730-4,202 RT USA
 VANILLIC-ACID PL PAS
 VANILLIN PL PAS
 VIT-B6 1.6-8.7 RT USA
 WATER 93,090-930,000 RT CRC PED
 USA

XANTHORRHIZOL 1-50 RH JAD NAP
 ZINC TR-57 RT CRC SMO USA
 ZINGERBERONE EO NAP
 ZINGERONE RT ABS
 ZINGIBAIN RT ABS
 ZINGIBERENE 0.5-30 RH JAD NAP
 ZINGIBERENES 890-17,836 RH JAD
 ALPHA-ZINGIBERENE 74-4,600 RH JAD
 NAP
 BETA-ZINGIBERENE RH JAD
 ZINGIBERENOL RT
 ZINGIBEROL 0-8,000 RH JAD NAP
 ZINGIBERONE 0.3-20 RH JAD NAP
 ZONARENE EO BML

1/ Much EO data derived from BML;
 Purseglove's spices. 5/ Abs.=Pak. J.
 Sci.Ind.Res. 28: 234. 1985

ZIZYPHUS JUJUBA MILL.

"JUJUBE; TA-TSAO; DA-ZAO"

ALPHITOLIC-ACID PL CCO
 ASCORBIC-ACID 460-3,882 FR CRC
 ASH 6,000-35,000 FR CRC
 ASH 86,000 LF CRC
 ASH 13,000-17,000 SD CRC
 ASH 108,000 SH CRC
 BETULINIC-ACID WD HHB
 BETULONIC-ACID PL CCO
 CALCIUM 260-1,602 FR CRC SMO
 CALCIUM 19,700 LF CRC
 CALCIUM 800-21,600 SH CRC
 CARBOHYDRATES 145,000-926,000 FR
 CRC
 CARBOHYDRATES 72,000-753,000 LF
 CRC HHB
 CARBOHYDRATES 748,000-950,000 SD
 CRC
 CARBOHYDRATES 753,000-789,000 SH
 CRC
 BETA-CAROTENE 0.2-700 FR CRC WOI
 CEANOTHIC-ACID WD HHB
 CITRIC-ACID 4,000-12,000 FR WOI
 COPPER 7 FR SMO
 COUMARIN 3,000 LF HHB
 3-P-COUMAROYLATE PL CCO
 FAT 1,000-17,000 FR CRC
 FAT 43,000 LF CRC
 FAT 4,000-335,000 SD CRC
 FAT 17,000 SH CRC
 FIBER 6,000-48,000 FR CRC
 FIBER 143,000 LF CRC
 FIBER 22,000-28,000 SD CRC

FIBER 301,000 SH CRC
 FRUCTOSE FR CCO
 GLUCOSE FR CCO
 IRON 7-170 FR CRC SMO
 JUJUBOSIDES FR CCO 411
 KILOCALORIES 590-3,550 FR CRC
 LEUCOCYANIDIN HU HHB
 LEUCOPELARGONIDINE WD HHB
 MAGNESIUM 620 FR SMO
 MALEIC-ACID PL CCO
 MANGANESE 10 FR SMO
 MASLINIC-ACID PL CCO
 MUCILAGE 40,000 LF HHB
 NIACIN 0.7-53 FR CRC
 OLEANOLIC-ACID PL CCO
 OLEANONIC-ACID PL CCO
 PECTIN 4,000 FR WOI
 PHOSPHORUS 270-2,120 FR CRC
 PHOSPHORUS 2,000 LF CRC
 PHOSPHORUS 2,300 SH CRC
 POTASSIUM 2,690-12,035 FR CRC SMO
 PROTEIN 12,000-106,000 FR CRC
 PROTEIN 118,000 LF CRC
 PROTEIN 23,000-394,000 SD CRC
 PROTEIN 86,000 SH CRC
 REDUCING-SUGARS 119,000-392,000 FR
 WOI
 RESIN 60,000 LF HHB
 RIBOFLAVIN 0.3-2.4 FR CRC
 RUTIN 15,000 LF HHB
 SAPONIN 2,500 LF HHB
 SCOPOLETIN PL CCO
 SODIUM 30-130 FR CRC SMO
 SUCROSE 122,000-208,000 FR WOI
 TANNIN 100,000 FR WOI
 TANNIN 46,000 LF HHB
 TARTATIC-ACID LF HHB
 THIAMIN 0.2-1.3 FR CRC
 URSOLIC-ACID PL CCO
 WATER 162,000-830,000 FR CRC
 WATER 213,000 SD CRC
 ZINC 21 FR SMO
 ZIZIPHUS-SAPONIN-I PL CCO
 ZIZIPHUS-SAPONIN-II PL CCO
 ZIZIPHUS-III PL CCO

ZIZYPHUS SPINA-CHRISTI (L.) WILLD.

"SYRIAN CHRIST-THORN"

AMPHIBINE BK JFM
 ASCORBIC-ACID 300-330 FR CRC
 ASH 44,000-49,000 FR CRC

CALCIUM 1,400-1,544 FR CRC
CARBOHYDRATES 806,000-889,000 FR
CRC
BETA-CAROTENE 0 FR CRC
FAT 9,000-10,000 FR CRC
IRON 33 FR CRC
KILOCALORIES 3,140-3,460 FR CRC
MAURITINE BK JFM

NIACIN 41 FR CRC
PHOSPHORUS FR CRC
POTASSIUM 5,300 FR CRC
PROTEIN 48,000-53,000 FR CRC
RIBOFLAVIN 1.4 FR CRC
BETA-SITOSTEROL PL CRC
THIAMIN 0.4 FR CRC
WATER 93,000 FR CRC



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